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밁 1 (bases 1 to 676)
Willis,J., Vision,T., D
Mimulus guttatus cDNA s
Unpublished (2004) 37 072-A Biological Sciences Science Drive, Tel: 919 660 7340 Fax: 919 660 7293 Mimulus guttatus
Eukaryota; Viridiplantae; Streptophyta; Embryophyta; Tracheophyta;
Epermatophyta; Magnoliophyta; eudicotyledons; core eudicots;
asterids; lamiids; Lamiales; Lamiales incertae sedis; Mimuleae; CV519050 6 0089P0022Z.x0_H04_Mimulus clone_0089P002ZZ.x0_H04, m Seq primer: T7 Email: jwillis@duke.edu Plate: 0089P0022 row: (Contact: Willis J Duke University Department of Biology Mimulus guttatus (spotted monkey TTCTTGACANNINNNNNNNNNNNN TTCTTGACANNNNNNNNNNNNNN 59 quality sequence start: 17 quality sequence stop: 514. Location/Qualifiers Conservative /organism="Mimulus guttatus"
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/db_xref="taxon:415;"
/clone="0089P0022Z.x0_H04"
/clone_lib="Mimulus guttatus library 2"
/note="Vector: pGEM-T Easy; a Mimulus guttatus library" . 676 100.0%; Score 23; ; Pred. No. 0, sequence Dietrich, F.S. 2 Mismatches 676 bp mRNA linear F s guttatus library 2 Mimulus mRNA sequence. 59 column: DB 7; 0.032; flower) Ξ and Allen, A. <u>,,</u> Length 676; Durham, NC 27708, USA Indels EST 06-OCT-2004 ٥. guttatus cDNA CDNA Gaps 0

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                                                                                                   Adf08271 Mouse apo
Adl86200 DNA up-re
Adl86201 DNA up-re
Ad42732 Recogniti
Aaq85563 B. subtil
Aaq85562 B. subtil
Aaq85562 B. subtil
Aaq85562 B. subtil
Aav99634 B.coli re
Aax32733 Recogniti
                                                                                                                                                                                                                                  Aav23173 Lactococc
Aav23174 Lactococc
Acn44752 Mouse gen
Abv25481 Human pro
                                                                                                                                                                                                                                                                                                               Description
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AAV23173
ID AAV23173
AC AAV2
XX AV2
AC AAV2
XX AV2
DT 28-J
DT 28-J
CX XX Lact
XX Lact
XX Lact
XX Lact
XX AV2
DE Lact
XX AV4
DE Lact
XX AV6
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XX AV7
DE Lact

   misc_feature
                              23-AUG-1996;
                                                         25-AUG-1997;
                                                                                      26-FEB-1998
                                                                                                                  WO9807846-A1
                                                                                                                                                                          misc_feature
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artificial p
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 (JENS/) JENSEN P R.
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                              96DK-00000886
                                                         97WO-DK000342
                                                                                                                                                                       /note= '63..68 
/*tag= 74..82
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/*tag=
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/*tag=
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31. .45
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                                                                                                                                               note=
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library; ds.
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"artificial
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AAQ48612 ADL88439 ADL88438 ADQ80615

ALIGNMENTS

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sequence"

promoter library"

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Database
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Sequence:
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seq length:
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gb_htg:*
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AC115951
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6235.594 Million cell updates/sec
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AC023783 Homo sapi
AC02379 Homo sapi
AC024735 Homo sapi
AC022955 Homo sapi
AC1253 Rattus no
AC102301 Mus muscu
AC115951 Mus muscu
AC015951 Mus muscu
AC013457 Homo sapi
AC013467 Homo sapi
AC015965 Homo sapi
AC015965 Homo sapi
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9	9	19.5	٥	9	9	20.4	20.4		20.4		20.4	20.4	20.4	20.4	20.4	20.4	20.4	20.4	20:4	20.4	20.4	20.4	٥.	20.4	20.4	
61258	59935	55208	49070	37661	1384	295808	292946	247062	241416	238883	232993	228108	227070	220434	214258	212722	189556	175654	164840	120444	117445	i.	110000	74105	63125	
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AC023082	AC018376	AC087394	AC101123	AC150980	CQ493603	AC151867	AC099347	AC099455	AC114100	AC122107	AC098761	AC142063	AC103223	AC106496	AC132994	AC087158	AC141170	AC025496	AC011127	AC136092	AL160263	AC118330 1	AC118330 0	AC087648	AC134783	
AC023082 Homo sapi	AC018376 Homo sapi	AC087394 Homo sapi	AC101123 Mus muscu	AC150980 Medicago	CQ493603 Sequence	AC151867 Callithri		AC099455 Rattus no	AC114100 Rattus no	AC122107 Rattus no	AC098761 Rattus no	AC142063 Rattus no	AC103223 Rattus no	AC106496 Rattus no	AC132994 Rattus no	AC087158 Mus muscu	Ratt	Home	AC011127 Homo sapi	AC136092 Rattus no	AL160263 Homo sapi	Continuation (2 of	Ratt	Homo	AC134783 Homo gapi	

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ALIGNMENTS

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REFERENCE
AUTHORS
TITLE
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BD006933
LOCUS
DEFINITION
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ORGANISM
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VERSION
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Bource
                                                          ORIGIN
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Query Match 100.0%; S
Best Local Similarity 100.0%; F
Matches 113; Conservative 0;
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                                                                                                                                                                                                                                                                                               derived from such libraries
Patent: JP 2001503249-A 2 13
PETER RUDAR JANSSEN
OS Unidentified
PN JP 2001503249-A/2
PD 13-MAR-2001
                                                                                                                                                                                                                                                                                                                                                                        1 (bases 1 to 113)
Hammer, K. and Janssen, P.R.
Artificial promoter.libraries for selected organisms and promoters
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 unidentified
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BD006933.1 GI:18635304
JP 2001503249-A/2.
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                                                                                                                                              promoter
-35signal
-10signal
                                                                                                                                                                                                                        Strandedness: Double;
                                                                                                                                                                                                                                      KALIN HAMMER, PETER RUDAR JANSSEN
C12N15/09, C12N15/00
                                                                                                                                                                                                                                                                    25-AUG-1997 JP 1998510287
23-AUG-1996 DK 0886/96
                                                                                                                                                                                                         opology: Linear;
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/db_xref="taxon:32644"
                                                                                                                           Location/Qualifiers
oter (23). (95)
ignal (55). (60)
ignal (78). (83).
Location/Qualifiers
             Score 113; DB 6;
Pred. No. 2.6e-52;
   Mismatches
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Gaps
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1 CGGGATCCAAGCTTAATATTAATTAGCACTCNNNNNNNNNGAGTGCTAATTTTTTTGACA 60

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Result
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Maximum DB
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gb_gss1:*
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gb_htc:*
gb_est3:*
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                                                  CG988771
CG988120
CB792605
CB746942
CB747018
CG991922
CN054920
                                                                                                                                      BQ588555
CB701255
CB778306
CC9778306
CC920506
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CR287310
AY417491
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CL668316
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CB790308
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                            AY417491 Mus muscu

BX94834 Arabidops

CG988771 CH240 1145

CG988170 CH240-141

CB792605 AMGNNUC:N

CB746942 AMGNNUC:N

CG547018 OST147310

CG991922 CH240 151

CN054920 Salamande

CN043556 V11 D47 J

CL68316 PRIO1575
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CB790308 AMGNNUC:N
CF918345 Bflor498.
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CR287310
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CH213-134
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17.7	17.7	17.7	17.7	17.7	17.7	17.7	17.7	17.7	17.7	17.7	17.7	17.7	17.7	17.7	17.7	17.7	17.7	17.7	17.7	18.6	
332	328	307	304	. 278	274	255	250	247	242	224	213	203	186	184	179	153	118	83	72	9177	
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BX292036	CG561371	BX895939	BX945052	CG977426	BX891296	CR402333	CR396322	CR400564	BX661521	CR400397	CR357873	BX894565	BX292365	BX532547	CL688872	BX534689	BX893640	AL759145	AL759144	AY417489	
BX292036 Arabidops	CG561371 OST18285	BX895939 Arabidops	BX945052 Arabidops	CG977426 CH240	BX891296 Arabidops	CR402333 Arabidop	CR396322 Arabidop	CR400564 Arabidops	BX661521 Arabidop	CR400397 Arabidop	CR357873 Arabidop	BX894565 Arabidop		BX532547 Arabidops		BX534689 Arabidops	BX893640 Arabidops	AL759145 Arabi	AL759144 Arabi	AY417489 Homo	
idops	32853	idops	idops	167	gdobs	sdop	gdops	edop	dops	dops	edops	edops	idops	edops	14c_G	idops	idops	Arabidops	Arabidops	sapi	

RESULT 2
CB790308
LOCUS
DEFINITION REFERENCE AUTHORS TITLE SOURCE ORGANISM ACCESSION VERSION KEYWORDS RESULT 1 CB546770/c LOCUS DEFINITION 밁 8 ORIGIN FEATURES COMMENT Matches Best Local Query Match JOURNAL source 83 52 TTTTTGACANNINININININININ 74 1 (bases 1 to 435)
Amgen EST Program.
Amgen Rat EST Program
Unpublished (2003) 435 bp AMGNNUC:NRPI3-00005-E12-A W Rat cDNA clone nrpi3-00005-E12-5', m CB546770 CB546770.1 GI:29430711 EST. 23; Tel: 805 447-4881

Plate: 00005 row: e column:
Location/Qualifiers Similarity Contact: Dan Fitzpatrick Rattus norvegicus (Norway rat) Eukaryota; Metazoa; Rattus Mammalia; Eutheria; TTTTGACANNNNNNNNNNNNNN Amgen Center Drive, Thousand Oaks, Conservative Inc /organism="Rattus norvegicus"
/mol type="mRNA"
/mol type="mRNA"
/db xref="taxon:10116"
/clome="nrpi3-00005-e12"
/clome="pituitary"
/clone type="pituitary"
/clone Tib="W Rat pituitary (10477)"
/clone="Vector: pspoRT1; Site 1: Sal1; Sipituitary adult female Wistar rat avg ir 495 20.4%; Chordata; Craniata; Vertebrata; Euteleostomi; Rodentia; Sciurognathi; Muridae; Murinae; 0 Score 23; Pred. No. Mismatches mKNA linear EST 01-APR-2003 W Rat pituitary (10477) Rattus norvegicus 5', mRNA sequence. 12. DB 6; 0.069; 0 CA 91320-1799, Length 435 Indels Site_2: Not1; W insert size 2.1 0 Gaps K a 0

CB790308 438 bp mRNA 1
AMGNNUC:NRHY4-00101-B5-A W Rat hypothalamus

linear 10464)

EST 16-MAY-2003

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Minimum
Maximum
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Gapop 60.0 , Gapext 60.0
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Match Length DB
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Copyright (c) 1993 - 2005 Compugen Ltd.
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Aad45726 Mycobacte
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AAV23174;
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	Adb87585 Primer DN	Adq97284 Mouse can	Acn44752 Mouse gen	Abd33102 Murine ca	Continuation (3 of	Adq97712 Mouse can		Aav74411 Staphyloc	Adq24050 Human sof	Adq23151 Human sof	Aaq99202 Pseudomon	Aad64097 Human met	Aaf86091 Methylthi	Human	Aat85305 Human met		Aat15167 Methylthi	Adc08481 Rice DNA	Abk53696 Human eos	DNA	Adl86200 DNA up-re	Adl84157 DNA up-re	an.	Aaq70086 DNA encod	Abz79664 Promoter

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misc_feature
                                                                                                                                    misc_feature
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        25-AUG-1997;
                                                                                                                                                                                                                                                                                                                                          Lactococcus lactis consensus temperature regulated promoter sequence
                          26-FEB-1998.
                                              WO9807846-A1
                                                                                                                                                                                       misc_feature
                                                                                                                                                                                                                                                                                Lactococcus lactis.
                                                                                                                                                                                                                                                                                                              Lactococcus lactis; artificial promoter
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                                                                                                                                                                                                                                                                                                                                                                                                        AAV23174 standard; DNA; 113 BP.
        97WO-DK000342.
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78. .83
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library; temperature regulated; ds.
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Maximum DB seq length: 200000000
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score greater than or equal to the score of the result being printed,
and is derived by analysis of the total score distribution.
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Gapop_60.0 , Gapext 60.0
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199
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gb_htc:*
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CB782812
CB556566
CB787398
CB785334
CB586432
W26383
BW334597022
CB893182
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CB810810
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. CB5/9994	CB0# / 600	CB50070	Canonar	COLSERA	CB586244	CB586931	CB60/139	CB00//20	receipted.	000000	7260030		CB613315	CB614138	CB612847	CR/RIATA	CB/150/9	CD115070	20171700	CB78360	CN045064	CB731640	CB/32961
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Match 34.2%; Score 68; DB 6; Length 350; Local Similarity 100.0%; Pred. No. 5.4e-27; Les 68; Conservative 0; Mismatches 0; Indels 0; Gaps 0;	Query Match Best Local : Matches 6:
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/mol type="mRNA"	
TO TOWN TOWN TO TOWN TOWN TOWN TOWN TOWN	. source
	FEATURES
Plate: 00212 row: g column: 4.	
Tel: 805 447-4881	
Amgen, inc One Amgen Center Drive, Thousand Oaks, CA 91320-1799, USA	
Contact: Dan Fitzpatrick	COMMENT
Unpublished (2003)	JOURNAL
	TITIE
Amgen EST Program.	SACHLLIN
Mammalia; Eutheria; Rodentia; Sciurognathi; Murlade; Murlide;	
Eukaryota; Metazoa; Chordata;	
Rattus norvegicus	SOURCE
	KEYWORDS
CB781007.1 GI:29869398	VERSION
CB781007	ACCESSION
œ.	DEC THE TOO
(10220) Rattus norvegicus cDNA clone	LOCUS
05761007 350 bp mRNA linear EST 16-MAY-2003.	CB781007/c

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Result
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Maximum DB seq length: 200000000
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199
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SCYOL140W
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BD006977
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100.0%; Sc 100.0%; Pr vative 0;	1199 /organism="Saccharomyces /mol_type="genomic DNA" /db_xref="taxon:4932"	Topology: Linear; Key Location, TATA signal (67)(; promoter (10)() Location/Qualifiers	25-AUG-1997 JP 1998510287 23-AUG-1996 DK 0886/96 KALIN HAMMER, PETER RUDAR JANSSEN C12N15/09,C12N15/00 Strandedness: Double;	Hammer, K. and Janssen, P.R. Artificial promoter libraries for sele derived from such libraries Patent: JP 2001503249-A 3 13-MAR-2001; PETER RUDAR JANSSEN OS Saccharomyces cerevisiae (yeast) PN JP 2001503249-A/3 PD 13-MAR-2001	BD006934 199 bp DNA linear PAT 31-JAN-200 Artificial promoter libraries for selected organisms and promoters BD006934.1 GI:18635305 BD006934.1 GI:18635305 JP 2001503249-A/3. Saccharomyces cerevisiae (baker's yeast) Saccharomyces cerevisiae (baker's saccharomyces cerevisiae Saccharomyces cerevisiae Saccharomyces fungi; Ascomycota; Saccharomycetales; Sacc
ore 199; DB 6; Length 199; red. No. 2.1e-94; Mismatches 0; Indels 0;	/Ces cerevisiae" "A"	; cocation/Qualifiers (67)(72) (10)(192). lifiers	7 96 JANSSEN	for selected organisms and promoters MAR-2001; (yeast)	199 bp DNA linear Piries for selected organisms es. (baker's yeast) (baker's yeast) ota; Saccharomycotina; Saccharomycetaceae; Saccharomyces.
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Copyright (c) 1993 - 2005 Compugen Ltd.
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		scandard name= "part or native sequence for ARGS gene including first codon"	/function= "Spacer"	/*tag= f	145192	/note= "arginine repressor binding site"	/"cag= e /bound moietv= "Arginine repressor"	/+to	/standard_name= "TI box"	/function= "Transcription initiation"	/*tag= d	122144	./*tag= c	6772	<pre>/note= "upstream activating promoters"</pre>	/bound_moiety= "GCN4 protein"	/*tag= a	1016	<pre>/note= "artificial promoter library"</pre>	/*tag= b	vo	Location/Qualifiers		cerevisiae.

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		Homo sapi	Human DNA	Homo sapi	Oryza sat	Homo sapi	Human DNA	Ното варі	Continuation (12 o	Aedes aeg	Human DNA	AC048349 Homo sapi	AL954297 Mouse DNA	U28409 Caenorhabdi	Oryza sat	Artificia	Artificia	Artificia	Artificia	Artificia	Homo sapi				

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                                                                                                                                                                                                                                                                                                   derived from such libraries
Patent: JP 2001503249-A 5 13-MAR-2001;
PETER RUDAR JANSSEN
                                                                                                                                                                                                                                                                                                                                                Artificial promoter
                                                                                                                                                                                                                                                                                                                                                                                                          Lactococcus lactis
Lactococcus lactis
Bacteria; Firmicutes; Lactobacillales; Streptococcaceae;
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Artificial promoter libraries
               Similarity
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Hammer, K. and Janssen, P.R.
100.0%; Score 60; DB 6; 1 larity 100.0%; Pred. No. 1.2e-23; Conservative 0; Mismatches 0;
                                                                                                                                                                                                                                                             Lactococcus lactis
JP 2001503249-A/5
13-MAR-2001
                                                                                                                                              promoter
                                                                                                                                                                                   KALIN HAMMER, PETER RUDAR JANSSEN
C12N15/09, C12N15/00
Strandedness: Double;
                                                                                                                                                                         Topology: Linear;
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23-AUG-1996 DK 0886/
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                                                                     /organism="Lactococcus lactis"
/mol_type="genomic DNA".
/db_xref="taxon:1358"
                                                                                                                             ocation/Qualifiers
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organisms
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Gaps
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1 CATACCGGAGTTTATTCTTGACAGTTCCACCTCGGGTTGATATAATATCTCAGTACTGTT

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Maximum DB
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Perfect score:
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Gapop 60.0 , Gapext 60.0
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Copyright (c) 1993 - 2005 Compugen Ltd.
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RESULT 1
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AC AAV2317
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DT 28-JUL-
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/standard_name= "Constitutional promoter"
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New artificial promoter libraries - containing consensus promoter sequences and variable spacers, used to generate promoters for optimising expression of genes.

WPI; 1998-179062/16.

Jensen PR,

Hammer K;

(JENS/) JENSEN P R.

This is a Lactococcus lactis constitutional promoter sequence used in the construction of an artificial promoter library of the invention. The

Claim 28; Page 43; 89pp; English

	GenCore version 5.1. Copyright (c) 1993 - 2005 Comp	5.1.6 Compugen Ltd.
OM nucleic - n	nucleic search, using sw model	
Run on:	June 20, 2005, 06:09:45 ; Search tir (without 1862.095	time 1226.5 Seconds ut alignments) 95 Million cell updates/sec
Title: Perfect score: Sequence:	US-09-242-657B-5 60 1 CATACCGGAGTTTATTCTTG	TATAATATCTCAGTACTGTT 60
Scoring table:	: OLIGO_NUC Gapop 60.0 , Gapext 60.0	
Searched:	34239544 seqs, 19032134700 residue	.
Word size :	0	
Total number o	of hits satisfying chosen parameters	68479088
Minimum DB seq Maximum DB seq	length: 0 length: 2000000000	
Post-processing	ng: Listing first 45 summaries	
Database :	EST: * 1: gb_est1: * 2: gb_est2: * 3: gb_htc: * 4: gb_est3: * 5: gb_est5: * 6: gb_est5: * 7: gb_est6: * 8: gb_gss1: * 9: gb_gss2: *	
Pred. No. score gre and is de	is the number of results predicte ater than or equal to the score of rived by analysis of the total sco SUMMARIES	d by chance to have a the result being printed, re distribution.
Result No. Score	% Query Match Length DB ID	Description
22	31.7 692 6 31.7 912 7	CA072590 SCEPAM101 CK151757 FGAS03446
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თ Մ	30.0 506 6 30.0 613 9	CB119387 K-EST0166
	30.0 630 5	BX473371 DXFZp686J
9	30.0 927 5	BU189979 AGENCOURT
	30.0 1116 4 28.3 416 9	BI910285 603068325 CE287823 tigr-gss-
	28.3 480 1 28.3 482 9	AU210653 AU210653
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-	28.3 651 4	BG866487 602785436
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Vettore, A.L., da Silva, F.R., Ku The libraries that made SUCEST Genet. Mol. Biol. 24 (1-4), 1-7 Saccharum officinarum Saccharum officinarum Saccharum officinarum Eukaryota; Viridiplantae; Streptophyta; Embryophyta; Tracheophyta; Eukaryota; Viridiplantae; Streptophyta; Embryophyta; Poaceae; PACCAD Spermatophyta; Magnoliophyta; Liliopsida; Poales; Poaceae; PACCAD clade; Panicoideae; Andropogoneae; Saccharum; Saccharum officinarum 5', mRNA sequence. CA072590 CA072590.1 GI:34924741 EST. CA072590 692 bp mRNA linear EST 23-SEP-2003 SCEPAM1018A05.g AM1 Saccharum officinarum cDNA clone SCEPAM1018A05 (bases 1 to 692) 24 (1-4), 1-7 (2001) Kemper, E.L. and Arruda, P.

complex.

REFERENCE AUTHORS TITLE JOURNAL COMMENT

VERSION
KEYWORDS
SOURCE
ORGANISM

ACCESSION

RESULT 1 CA072590/c LOCUS DEFINITION

ALIGNMENTS

FEATURES Bource Contact: Arruda P
Centro de Biologia Molecular e Engenharia Genetica
Universidade Estadual de Campinas
Caixa Postal 6010, 13083-970, Campinas SP, Brazil
Tel: 55 19 3788 1137
Fax: 55 19 3788 1089
Email: parruda@unicamp.br
Clone distribution: clone distribution information can be found through the Brazilian Clone Collection Center (BCCC) at http://www.bcccenter.fcav.unesp.br
Plate: 018 row: A column: 05
Seq primer: T7 Promoter Primer. /clone lib="AMI"

/note="Organ: Apical meristem and tissues surrounding of mature plants; Vector: pSport1; Site 1: Sal1; Site 2: Not1; An unidirectional cDNA library generated from [Apical meristem and tissues surrounding of mature plants]. cDNA was prepared from polyA+ mRNA using SuperScript Plasmid System Kit (Invitrogen). The double-strand cDNAs were fractionated in a sepharose CL-2B 40cm-columns and fragments sizing between 0.8 and 1.5 Kb were directionally cloned into the vector. Detail /organism="Saccharum officinarum" /mol_type="mRNA" /db_xref="taxon:4547" /clone="SCEPAM1018A05" Location/Qualifiers lab host="DH10B" Details

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Minimum
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1 CATGGCTTAGTTTATTCTTGACAGGGTAGTATCACTGTGATATAATAGGACAGTACTGTT 60
                                                                                                                                                                                                                                    Patent: JP 2001503249-A 6 13-MAR-2001;
PETER RUDAR JANSSEN
OS Lactococcus lactis
PN JP 2001503249-A/6
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PF 25-AUG-1997 JP 1998510287
PR 23-AUG-1996 DK 0886/96
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Hammer, K. and Janssen, P.R.
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REFERENCE AUTHORS 밁 S ORIGIN SOURCE ORGANISM RESULT 1 CE259388/c LOCUS COMMENT ACCESSION VERSION FEATURES KEYWORDS DEFINITION MEDLINE PUBMED TITLE JOURNAL Matches Query Match Best Local Bource 186 TGATATAATAGGACAGTACTG 166 Contact: Kirkness EF
The Institute for Genomic R
Department of Eukaryotic Ge
Rockville, MD 20850, USA
Tel: 301-838-0200
Fax: 301-838-0208 38 TGATATAATAGGACAGTACTG 58 tigr-gss-dog-17000346345759 D genomic survey sequence. GE259388 (bases 1 to 261)

Kirkness, E.F., Bafna, V., Halpern, A.L., Levy, S., Remington, K., Rusch, D.B., Delcher, A.L., Pop, M., Wang, W., Fraser, C.M. and Venter, J.C. Similarity Email: ekirknes@tigr.org The dog genome: survey sequencing and comparative analysis Science 301 (5641), 1898-1903 (2003) Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Carnivora; Fissipedia; Canidae; Canis. Canis familiaris CE259388.1 GI:35967739 GSS. Canis familiaris (dog) Conservative /organism="Canis familiaris"
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Lactococcus lactis.
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This is a Lactococcus lactis constitutional promoter sequence used in the construction of an artificial promoter library of the invention. The

Claim 28; Page 43; 89pp; English.

New artificial promoter libraries - containing consensus promoter sequences and variable spacers, used to generate promoters for optimising expression of genes.

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Ada98640 Human sec
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ALIGNMENTS

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XX Synt
XX Sy Lactococcus lactis constitutional promoter Cp11 28-JUL-1998 AAV23179; AAV23179 standard; DNA; 59 BP. (first entry)

Synthetic. Lactococcus lactis. promoter /*tag= Location/Qualifiers /*tag= a /standard_name= "Constitutional promoter"

Lactococcus lactis; constitutional promoter; optimise; spacer; artificial promoter library; gene expression; ds.

25-AUG-1997; 26-FEB-1998 WO9807846-A1 97WO-DK000342.

(JENS/) JENSEN P R.

23-AUG-1996;

96DK-00000886

WPI; 1998-179062/16. Jensen PR, Hammer K;

New artificial promoter libraries - containing consensus promoter sequences and variable spacers, used to generate promoters for optimising expression of genes.

Claim 28; Page 44; 89pp; English

This is a Lactococcus lactis constitutional promoter sequence used in construction of an artificial promoter library of the invention. The the

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Result
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  Matches
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Hammer, K. and Janssen, P.R.
Artificial promoter libraries for selected derived from such libraries
Patent: JP 2001503249-A 7 13-MAR-2001;
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OS Lactococcus lactis
PN JP 2001503249-A/7
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Artificial promoter libraries derived from such libraries.
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JP 2001503249-A/7.
              Similarity
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 100.0%;
ilarity 100.0%;
Conservative 0,
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C12N15/09, C12N15/00
Strandedness: Double;
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25-AUG-1997 JP 1998510287
23-AUG-1996 DK 0886/
                                                                                                                                                Topology: Linear;
                                                         /organism="Lactococcus lactis"
/mol_type="genomic DNA"
/db_xref="taxon:1358"
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Score 59; DB 6; I
Pred. No. 1.1e-23;
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	TITLE JOURNAL COMMENT	ORGANISM REFERENCE AUTHORS	ACCESSION VERSION KEYWORDS SOURCE	RESULT 1 BB483350 LOCUS
Sciences Čenter(GSC), Yokohama Institute The Institute of Physical and Chemical Research (RIKEN) 1-7-22 Suchiro-cho, Tsurumi-ku, Yokohama, Kanagawa 230-0045, Japan Tel: 81-45-503-9222 Fax: 81-45-503-9216 Email: genome-res@gsc.riken.jp, URL:http://genome.gsc.riken.jp/ Carninci,P., Shibata,Y., Hayatsu,N., Sugahara,Y., Shibata,K., Itoh,M., Konno,H., Okazaki,Y., Muramatsu,M. and Hayashizaki,Y. Normalization and subtraction of cap-trapper-selected cDNAs to prepare full-length cDNA libraries for rapid discovery of new genes. Genome Res. 10 (10), 1617-1630 (2000) wagi,K., Fujiwake,S., Inoue,K., Togawa,Y., Izawa,M., Ohara,E., Watahiki,M., Yoneda,Y., Ishikawa,T., Ozawa,K., Tanaka,T., Matsuura,S., Kawai,J., Okazaki,Y., Muramatsu,M., Tanaka,T., Mataurashizaki,Y.	Hara,A., Hiramoto,K., Hori,F., Ishi,Y., Ito,M., Kawai,J., Konno,H., Kouda,M., Koya,S., Matsuyama,T., Miyazaki,A., Nomura,K., Ohno,M., Okazaki,Y., Okido,T., Saito,R., Sakai,C., Sakai,K., Sano,H., Sasaki,D., Shibata,K., Shinagawa,A., Shiraki,T., Sogabe,Y., Suzuki,H., Tagami,M., Tagawa,A., Takahashi,F., Takeda,Y., Tanaka,T., Toya,T., Muramatsu,M. and Hayashizaki,Y. RIKEN Mouse ESTs (Arakawa,T., et al. 2001) Unpublished (2001)	Mus musculus Bukaryota; Metazoa; Chordata; Craniata; Vertebrata; Buteleostomi; Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus. 1 (Dases 1 to 642) Arakawa,T., Carninci,P., Fukuda,S., Furuno,M., Hanagaki m	musculus cidna cidne b430019N09 3', mRNA sequence. BB483350 BB483350.2 GI:16441028 EST. Mus musculus (house mouse)	642 bp mRNA linear

RIKEN integrated sequence analysis (RISA) system--384-format sequencing pipeline with 384 multicapillary sequencer. Genome Res. 10 (11), 1757-1771 (2000)

Konno,H., Fukunishi,Y., Shibata,K., Itoh,M., Carninci,P.,
Sugahara,Y. and Hayashizaki,Y.

Konno,H., Fukunishi,Y., Shibata,K., Itoh,M., Carninci,P.,
Sugahara,Y. and Hayashizaki,Y.
Computer-based methods for the mouse full-length cDNA
encyclopedia: real-time sequence clustering for construction of a

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GenCore version 5.1.6 (c) 1993 - 2005 Compugen Ltd.

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Aal07992 Human bre
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ALIGNMENTS

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WPI; 1998-179062/16.
                                                                      Jensen PR,
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Lactococcus lactis.
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                                                                                  (JENS/) JENSEN P R.
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                                                                      Hammer K;
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This is a Lactococcus lactis constitutional promoter sequence used in construction of an artificial promoter library of the invention. The

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Claim 28; Page 44; 89pp; English

expression of genes.

New artificial promoter libraries - containing consensus promoter sequences and variable spacers, used to generate promoters for optimising

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CQ433174 Sequence
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ALIGNMENTS

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REFERENCE AUTHORS TITLE ACCESSION VERSION KEYWORDS SOURCE ORGANISM RESULT 1 BD006939 LOCUS DEFINITION ORIGIN FEATURES COMMENT Query Match Best Local JOURNAL source derived from such libraries Patent: JP 2001503249-A 8 13-MAR-2001; PETER RUDAR JANSSEN h 100.0%; Similarity 100.0%; 60; Conservative 0 JP 2001503249-A/8. BD006939 Artificial promoter libraries Artificial promoter 1 (bases 1 to 60) Hammer, K. and Janssen, P.R. Bacteria; Firmicutes; Lactobacillales; Streptococcaceae; Lactococcus lactis BD006939.1 GI:18635310 Lactococcus lactis JP 2001503249-A/8 13-MAR-2001 25-AUG-1997 JP 1998510287 23-AUG-1996 DK 0886/96 promoter KALIN HAMMER, PETER RUDAR JANSSEN C12N15/09, C12N15/00 Strandedness: Double; fopology: Linear; from such libraries. /organism="Lactococcus lactis" /mol_type="genomic DNA" /db_xref="taxon:1358" Location/Qualifiers libraries Location/Qualifiers (4). .(60) Score 60; DB 6; I Pred. No. 3.8e-23; ; Mismatches 0; a for for selected organisms and DNA selected Length 60; linear P lorganisms promoters

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REFERENCE AUTHORS FEATURES SOURCE ORGANISM ACCESSION VERSION KEYWORDS RESULT 1 AQ458484 LOCUS DEFINITION COMMENT JOURNAL MEDLINE TITLE source Class: BAC ends Class: BAC ends High quality sequence stop: 443. Location/Qualifiers Email: jwallace@u.washington.edu Clones are derived from the human BAC library RPCI-11. For BAC library availability, please contact Pieter de Jong (pieter@dejong.med.buffalo.edu). Clones may be purchased from BACPAC Resources (http://bacpac.med.buffalo.edu/ordering_bac.htm) or from Resear h Genetics (info@resgen.com). BAC end Web Server: http://www.htsc.washington.edu plate: 637 row: E column: 7 Seq primer: SP6 Contact: Mahairas GG, Wallace JC, Hood L High Throughput Sequencing Center University of Mashington 401 Queen Anne Avenue North, Seattle, WA 98109, USA Tel: (206) 616-3618 Fax: (206) 616-3887 AQ458484 443 bp DNA linear GSS 23-APR-1999 HS 5061 Al CO4 SP6E RPCI-11 Human Male BAC Library Homo sapiens genomic clone Plate=637 Col=7 Row=E, genomic survey sequence. AQ458484 AQ458484.1 GI:4637124 Sequence-tagged connectors: A sequence approach to mapping and scanning the human genome Proc. Natl. Acad. Sci. U.S.A. 96 (17), 9739-9744 (1999) Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo. 1 (bases 1 to 443) Mahairas,G.G., Wallace,J.C., Smith,K., Swartzell,S., Holzman,T., Keller,A., Shaker,R., Furlong,J., Young,J., Zhao,S., Adams,M.D. au Hood.L. Homo sapiens (human) Homo sapiens /sex="male" /clone lib="RPCI-11 Human Male BAC Library" /note="Vector: pBACe3.6; Site_1: EcoRI; Site_2: EcoRI; /organism="Homo sapiens" /mol_type="genomic DNA" /db_xref="teaxon:9606" /clone="plate=637 Col=7 Row=E"

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This is a Lactococcus lactis constitutional promoter sequence used in the construction of an artificial promoter library of the invention. The

Claim 28; Page 45; 89pp; English.

New artificial promoter libraries - containing consensus promoter sequences and variable spacers, used to generate promoters for optimising expression of genes.

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SUMMARIES

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h Simila 60; Co			PETER R OS La PN JE PN 13 PD 13	Lactococcus. 1 (bases 1 Hammer, K. an Artificial p derived from Patent: JP 2	BD006940.1 BD006940.1 JP 200150324 Lactococcus Lactococcus Bacteria; Fi	BD006940 Artifici derived
vat.	promoter Locatic 160 /organi /mol_t; /db_xre	Z3-AUG-1996 DK KALIN HAMMER, PETH C12N15/09, C12N15/ Strandedness: DOto Strandedness: Linear; Topology: Linear; Key I	PETER RUDAR JANSSEN OS Lactococcus la PN JP 2001503249- PN JP 3-MAR-2001 PD 13-MAR-2001 PF 25-AUG-1997 JP	actococcus. (bases 1 to 60) anmmer, K. and Jans rtificial promote arived from such atent: JP 2001503	BD006940 BD006940.1 GI:186 BD006940.1 GI:186 TP 2001503249-A/9. Lactococcus lactis Bactococcus lactis Bacteria; Firmicut	10 Sial pro
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75	ocation/Qualifiers 160 (organism="Lactococcus mol_type="genomic_DNA" db_xref="taxon:1358"	23-AUG-1996 DK 0886/96 KALIN HAMMER, PETER RUDAR JANSSEN C12N15/09,C12N15/00 Strandedness: Double; Topology: Linear; Location/Qualifiers CROMOTER (44) (60)		P.R. braries aries A 9 13-1	.1 Lactoba	in C
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Contact: Hideko Urushihara
Institute of Biological Sciences
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AU040066 Dictyostelium discoideum SL (H.Urushihara) Dictyostelium discoideum SL (H.Urushihara) Dictyostelium discoideum CDNA clone SLA350, mRNA sequence.
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DNA Res. 5 (6), 335-340 (1998)
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'= 'Dictyostelium discoideum
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/clone_lib="Dictyostelium discoideum SL (H.Urushihara)"
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Key promoter Synthetic Lactococcus lactis; constitutional promoter; optimise; spacer; artificial promoter library; gene expression; ds. Lactococcus lactis constitutional promoter Cp14. AAV23182; Lactococcus lactis. 28-JUL-1998 AAV23182 standard; DNA; 60 BP (first entry) Location/Qualifiers /*tag= a
/gtandard_name= "Constitutional promoter"

23-AUG-1996; 25-AUG-1997; 26-FEB-1998. WO9807846-A1 96DK-00000886 97WO-DK000342

Jensen PR, Hammer K;

New artificial promoter libraries - sequences and variable spacers, use expression of genes. spacers, used containing consensus promoter to generate promoters for optimising

Claim 28; Page 45; 89pp; English

This is a Lactococcus lactis constitutional promoter sequence used in the construction of an artificial promoter library of the invention. The

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Result
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y Mato Local hes	Source	FEATURES	COMMENT	REFERENCE AUTHORS TITLE JOURNAL	ACCESSION VERSION KEYWORDS SOURCE ORGANISM	BD006941 LOCUS DEFINITION
100.0%; Score 60; DB 6; Length 60; Best Local Similarity 100.0%; Pred. No. 1.8e-22; Matches 60; Conservative 0; Mismatches 0; Indels 0; Gaps 0;	160 160 /organism="Lactococcus lactis" /mol type="genomic DNA" /db_xref="taxon:1358"	PI Z3-AUG-1996 DK 0896/96 PI KALIN HAMMER, PETER RUDAR JANSSEN CC C12N15/09,C12N15/00 CC Strandedness: Double; CC Topology: Linear; FH Key Location/Qualifiers FT promoter (4) (60).	TER RUDAR JANSSEN Lactococcus lactis JP 2001503249-A/10 13-MAR-2001 25-AUG-1997 JP 1985	Lactococcus. 1 (bases 1 to 60) 1 (bases 1 to 60) Hammer, K. and Janssen, P.R. Artificial promoter libraries for selected organisms and promoters derived from such libraries Patent: JP 2001503249-A 10 13-MAR-2001;	BD006941.1 GI:18635312 BD006941.1 GI:18635312 TP 2001503249-A/10. Lactococcus lactis Lactococcus lactis Lactococcus lactis Bacteria; Firmicutes; Lactobacillales; Streptococcaceae;	BD006941 BD006941 Artificial promoter libraries for selected organisms and promoters derived from such libraries

1 CATGACGGAGTTTATTCTTGACACAGGTATGGACTTATGATATAAAAACAGTACTGTT 60

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Result
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CL1160622 ISB1-5302
CL135919 ISB1-107E
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Query Match Best Local 166 TATGATATAATAAAACAGTAC 186 36 TATGATATAATAAACAGTAC 56 High quality sequence start: 4
High quality sequence stop: 617.
Location/Qualifiers Seq primer: Sp6 Class: BAC ends Similarity 100. 21; Conservative Email: submissions@watson.wustl.edu Genome Sequencing Center
Washington University School of Medicine 1 (bases 1 to 1006)
Kremitzki,C., Carter,J., McPherson,J., Warren,W.,
Mardis,E. and Wilson,R. genomic survey sequence. CL117746 Contact: Richard K Wilson Unpublished Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Buteleostomi; Amphibia; Batrachia; Anura; Mesobatrachia; Pipoidea; Pipidae; Xenopus tropicalis (western clawed frog) Xenopus tropicalis CL117746.1 GI:40611381 CL117746 1006 bp DNA linear GSS 05-JAN-2004 ISB1-69B10_Sp6.1 ISB1 Xenopus tropicalis genomic clone ISB1-69B10, nsert Length: 75000 physical map of the xenopus tropicalis genome npublished (2003) /organism="Xenopus tropicalis"
/mol_type="genomic DNA"
/db_xref="raxon:8364"
/clone="ISB1-69B10"
/clone=1ib="ISB1"
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Library Segment 1" 1. .1006 Sp6 ATTTAGGTGACACTATAG 35.0%; Score 21; DB 9; 100.0%; Pred. No. 0.72; 0; Std Error: Mismatches 0.00 0; Indels Length 1006; ٥, Gaps 0

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      Abv47709 Human pro
Aas01150 Interfero
Aas01151 Interfero
Aas01152 Interfero
Abl06126 Drosophil
Abd03179 Human can
Ade24797 Human end
Ad113719 Osteoarth
Ad693537 Human MRC
Aac85419 Salmo sal
Aac28723 Human sec
Ann57955 Cotton gy
Acn49616 Cotton gy
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Abv47709 Human pro
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ALIGNMENTS

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RESULT 1
AAV23183
ID AAV23183
ID AAV23183
AC AAV2
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XX Lact
XX Lact
XX Synt
OS Synt
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FH Pror
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PT sequence
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                                                      New artificial promoter libraries - sequences and variable spacers, use expression of genes.
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Lactococcus lactis.
                                                                                                                                                                                                                                                                                                                                                                    Lactococcus lactis; constitutional promoter; optimise; spacer; artificial promoter library; gene expression; ds.
                                                                                                      WPI; 1998-179062/16.
                                                                                                                            Jensen PR,
                                                                                                                                                                           23-AUG-1996;
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                                                                                                                                                                                                                                                                                                          Location/Qualifiers
                                                                                                                                                                                                                                                                       /standard_name= "Constitutional promoter"
                                                                                                                                                                                                                                                                                      /*tag= a
                                                                  es - containing consensus promoter used to generate promoters for optimising
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ADR85563

This is a Lactococcus lactis constitutional promoter sequence used in construction of an artificial promoter library of the invention. The

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Claim 28; Page 46; 89pp; English

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Result
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TITLE JOURNAL COMMENT ACCESSION VERSION KEYWORDS SOURCE ORGANISM RESULT 1 BU086538 LOCUS REFERENCE AUTHORS FEATURES DEFINITION Bource Plate: 09 row: 1 Seq primer: SAC High quality sequ Email: mark.blaxter@ed.ac.uk The library was prepared for Dr. Davi Nottingham. Sequencing was performed Unit, Sanger Centre, Cambridge, UK (N 3JT, UK. Tel: +44 131 650 6760 Fax: +44 131 670 5450 Contact: Blaxter ML Institute of Cell, Anima University of Edinburgh BU086538 157 bp mRNA linear EST Na_L3_09E06_SAC Necator americanus (parasitic nematode) americanus cDNA clone Na_L3_09E06 5', mRNA sequence. Barrell). Ti PCR PRimers BACKWARD: T7PL FORWARD: SAC Hall,N., Quayle,M. and Barrell,B. Edinburgh University/Sanger Centr Unpublished (2000) Blaxter, M.L., Necator americanus BU086538.1 GI:22527727 BU086538 Ashworth Labs, King's Buildings, Bukaryota; Metazoa; Nematoda; Chromadorea; Rhabditida; Strongylida; Necator americanus (bases 1 to quality sequence stop: 157. ngham. Sequencing was performed by the Pathogen Sequencing Sanger Centre, Cambridge, UK (Neil Hall, Mike Quail and Bart 1). The sequence contained a PolyA tail (trimmed) /dev_stage="L3" /clone_lib="Necator americanus (parasitic nematode) L3" /clone_lib="Nector: pCMV-PCR vector; Site_1: EcoRI (5'end); /note="Vector: pCMV-PCR vector americanus is a human Site_2: XhoI (3'end); Necator americanus is a human hookworm, responsible for debilitating anaemia. The /organism="Necator americanus" /mol_type="mdNA" /db_xref="taxon:51031" /clone="Na_L3_09E06" /sex="Mixed" /sex="Mixed" ocation/Qualifiers Parkinson, J., Whitton, C., w Animal column: 06 Ancylostomatidae; and Centre Population Biology David Pritchard University of West Mains Road, Nematode Bunostominae; Daub, J., Guiliano, D., EST Project Edinburgh, Necator. EST 27-AUG-2002 de) L3 Necator EH9

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Continuation (2 of
Adq97870 Human can
Acn44142 Human gen
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Aav23197
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This is a Lactococcus lactis constitutional promoter sequence used in construction of an artificial promoter library of the invention. The

New artificial promoter libraries - of sequences and variable spacers, used expression of genes.

containing consensus promoter to generate promoters for optimising

Claim 28; Page 46; 89pp;

English

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Title:
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Sequence:
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/db_xref="taxon:1358"	ORIGIN
/organism="Lactococcus lactis"	
1	Bource
promoter (4)(58).	FEATURES
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Topology: Linear;	6
Strandedness: Double;	23
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KALIN HAMMER, PETER RUDAR JANSSEN	PH
23-AUG-1996 DK 0886/96	PR
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JP 2001503249-A/12	PN
Lactococcue lactis .	COMMENT OS
PETER RUDAR JANSSEN	Ed
Patent: JP 2001503249-A 12 13-MAR-2001;	JOURNAL Pa
	de
Artificial promoter libraries for selected organisms and promoters	
Hammer, K. and Janssen, P.R.	
(bases 1 to 58)	REFERENCE 1
Lactococcus.	La
Bacteria; Firmicutes; Lactobacillales; Streptococcaceae;	
Lactococcus lactis	ORGANISM La
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NC 27695, USA
Tel: 919 515 7800
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ORIGIN BQ634768 MXRV073 A06 F NXRV (Nsf Xylem clone NXRV073 A06 5', mRNA sec Email: ron_sederoff@ncsu.edu, jerri_johnson@ncsu.edu Please see http://web.ahc.umn.edu/biodata/nsfpine/ fi Eukaryota; Viridiplantae; Streptophyta; Embryophyta; Spermatophyta; Coniferopsida; Coniferales; Pinaceae; 1 (bases 1 to 667) Molecular Basis of Wood Formation Pinus taeda (loblolly pine) Carolina State University /organism="Pinus taeda" /mol_type="mRNA" /strain="Coastal plain lo /db_xref="taxon:3352" /lab_hosi="XL1-Blue" /clone lib="NXRV (Nsf xylem Root wood Vertical)" /clone lib="NXRV (Nsf xylem Root wood Vertical)" /note="Vector: pBlueScript SK-; Site 1: Eco RI; Site /note="Vector: pBlueScript SK-; Site 1: Eco RI; Site XhoI; The library is from primary xylem scraped from roots of a twelve year old tree in the transitional from juvenile wood to mature wood production. NOTE: sequences contain a 'CDNA adapter' between the EcoRI and the start of the EST. The adaptersequence is cell_type="Root (primary)" dev_stage="Transitional" ocation/Qualifiers issue_type="Xylem" Lone="NXRV073_A06" Centennial Campus, 667 bp r sequence. loblolly pine ä mRNA wood the linear EST 07-MAY-2003 Vertical) Pinus taeda cDNA Pine Megagenome Campus from North Box 7247, Raleigh, for Tracheophyta; Pinus; Pinus. further Site_2: Carolina" phase The site

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88
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           seq length: 0 seq length: 2000000000
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Gapop 60.0 , Gapext 60.0
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                                                                                                                                                      Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   4390206 seqs, 2959870667 residues,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              US-09-242-657B-13
59
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23075
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ABA197626
                                                                                                      AAV23185
AAV23200
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                                            AAV23179
AAV23177
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                                                                      Ade56066 Rat gene
Aba19112 Human ner
                                                                                                      Aav23200 Lactococc
                                                                                                                                                   Description
                              Aav23210
                                                                                                                     Aav23185 Lactococc
                                                         Adq97626 Mouse can
           Lactococc
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27.1	27.1	27.1	27.1	27.1	27.1	27.1	27.1	27.1	27.1	27.1	27.1	27.1	27.1	27.1	27.1	27.1	27.1	27.1	27.1	27.1	27.1	27.1	27.1	27.1
11740	8927	6690	3780	3780	3780	3611	2791	2651	2567	2368	2368	2368	2307	2304	1978	1198	909	782	775	627	585	579	539	504
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ADQ87583	ABV25552	ADL63587	ADP23149	ADB75251	ACC50123	AAF16033	ABA17926	AAX39894	ADI16269	ADR24735	ADD18543	ACC50122	AAQ34672	AAV35685	AAH18595	AAV35687	AAX39902	AAX39896	AAX39900	AAA37787	AAH12182	ACH26916	ADQ58054	AAX61721
Ad	Abv	Adl	. Ad	Ad	Acc	Aaf	Aba	Aax	Ad	Ad	Ad	Acc	Aag	Àaν	Aah	Aav	Aax	Aax	, Aax	Aaa	Aal	Ach	Ac.	Aax
Adq87583 Human tum	Abv25552 Human pro	Adl63587 Human ova	Adp23149 PRO polyp	Adb75251 Prostate	Acc50123 Breast ca	Aaf16033 Human pro	Aba17926 Human ner	Aax39894 Gastric c	Adi16269 Human nuc	Adr24735 Breast ca	Add18543 Human pro		Aaq34672 P39-alpha	Aav35685 B. burgdo	Aah18595 Human cDN	Aav35687 B. burgdo	Aax39902 Gastric c		Aax39900 Gastric c	Aaa37787 S. zooepi		Ach26916 Human adu	Adq58054 Novel can	Aax61721 B. burgdo

ALIGNMENTS

RESULT 1 AAV23185

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New artificial promoter libraries - (
sequences and variable spacers, used
expression of genes.
                                                                                                                                                                                                                                                                                Lactococcus lactis; constitutional promoter; optimise; artificial promoter library; gene expression; ds.
                                                                               WPI; 1998-179062/16.
                                                                                              Jensen PR, Hammer K;
                                                                                                                                   23-AUG-1996;
                                                                                                                                                    25-AUG-1997;
                                                                                                                                                                       26-FEB-1998.
                                                                                                                                                                                        WO9807846-A1
                                                                                                                                                                                                                            promoter
                                                                                                                                                                                                                                                      Lactococcus lactis.
                                                                                                                                                                                                                                                               Synthetic
                                                                                                                                                                                                                                                                                                           Lactococcus lactis constitutional promoter Cp17.
                                                                                                                                                                                                                                                                                                                              28-JUL-1998
                                                                                                                                                                                                                                                                                                                                                AAV23185;
                                                                                                                                                                                                                                                                                                                                                                  AAV23185 standard; DNA; 59 BP
                                                                                                                 (JENS/) JENSEN P R.
                                                                                                                                                                                                                                                                                                                              (first entry)
                                                                                                                                   96DK-00000886
                                                                                                                                                    97WO-DK000342
                                                                                                                                                                                                                                   Location/Qualifiers
                                                                                                                                                                                                        /standard_name= "Constitutional promoter"
                                                                                                                                                                                                                   /*tag=
                                                  containing consensus promoter dto generate promoters for optimising
                                                                                                                                                                                                                                                                                         spacer;
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0 0 0 0 0

27.1 27.1 27.1 27.1

AAC03364 ADQ55705 AAD23585 ADD66873 ADE88127 ACH47974

Aav23191 Lactococc
Aav23182 Lactococc
Aav23192 Lactococc
Aav23192 Lactococc
Aac03364 Human sec
AdG55705 Novel can
Aadd23585 Human lun
Add66873 Human lun
Add688127 Human lun
Ach47974 Human lun
Ach47974 Human ach47974 B. burgdo
Ach22706 Human adu

This is a Lactococcus lactis constitutional promoter sequence used in the construction of an artificial promoter library of the invention. The

Claim 28; Page 47; 89pp; English

Lactococc

AAV23199 AAV23182

α α,α α α

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Result
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seq length: 2000000000
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59
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Copyright (c) 1993 - 2005
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AC093804
AC021615
AL935328
AC083795
AC134254
AC093358
AC140930
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AC108340
                                                                 AC102740
    AE000756
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Compugen Ltd
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BD006944 Artificia
AC108340 Rattus no
AL139420 Human NNA
AC093804 Homo sapi
AC021615 Homo sapi
AL021615 Homo sapi
AL0214254 Mouse DNA
AC083795 Homo sapi
AC134254 Mus muscu
AC140330 Mus muscu
AC140330 Mus muscu
AC102318 Mattus no
AC102740 Mus muscu
BC102740 Mus muscu
BC102740 Mus muscu
BD006959 Artificia
BV079516 D17JC882
AC006666 Caenorhab
BE000756 Aquifex a
                                                                                                                                                                                                                                                                                 Description
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17	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17
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182314	172070	170497	166001	164452	162626	159473	152511	151479	151104	149326	148504	147042	146640	146167	146074	145366	127683	123066	115006	110000	109222	100000	84076	60101	55237
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AL935301	AC134951	AC117037	HSA462D18	CNS01RGP	AC138551	BX247953	AC019269	AC093713	AC115001	CNS01RHU	AC147906	AL935296	AC149787	AC087588	AC141806	AC024945	AC003683	AC093105	OSJN00110.	AE016819_14	CNS08C91	AP000081	AC149797	AC101124	CNS08CBG
AL935301 Mouse DNA	AC134951 Danio rer	AC117037 Rattus no	Humar	AL159140 Human chr	AC138551 Danio rer	BX247953 Mouse DNA	AC019269 Homo sapi	AC093713 Oryza sat	AC115001 Mus muscu		AC147906 Xenopus t			Homo		Homo		AC093105 Schistoso	AL606694 Oryza sat		AL732378 Oryza sat	Homo		AC101124 Mus muscu	AL928743 Oryza sat

ALIGNMENTS

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REFERENCE
AUTHORS
TITLE
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KEYWORDS
SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        RESULT 1
BD006944
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Best Local S
Matches 59
                                                                                                                                                                                                                                                                                                    JOURNAL
                                                                                                            source
                                                                                                                                                                                                                                                                                     derived from such libraries
Patent: JP 2001503249-A 13 13-MAR-2001;
PETER RUDAR JANSSEN
                                                                                                                                      PHCCCPFFBB
                                                                                                                                                                                                                                                                                                                            1 (bases 1 to 59)
Hammer, K. and Janssen, P.R.
Artificial promoter libraries for selected
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JP 2001503249-A/13.
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                Similarity
                                                                                                                                                                                                                                                                                                                                                                                                Lactococcus lactis
  100.0%; Score 59; DB 6; larity 100.0%; Pred. No. 8.7e-25; Conservative 0; Mismatches 0;
                                                                                                                                                                                                                                                           Lactococcus lactis
JP 2001503249-A/13
                                                                                                                                                                         C12N15/09,C12N15/00
Strandedness: Double;
                                                                                                                                                                                                                       25-AUG-1997 JP 1998510287
23-AUG-1996 DK 0886/
                                                                                                                                                              Popology: Linear
                                                                                                                                                                                                       CALIN HAMMER, PETER RUDAR JANSSEN
                                                                                                                                                                                                                                                 L3-MAR-2001
                                                                 /organism="Lactococcus lactis"
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                                                                                                                      location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                 Firmicutes; Lactobacillales; Streptococcaceae,
                                                                                                            . 59
                                                                                                                                     Location/Qualifiers (4). . (59).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             59 bp
ries for
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          DNA linear PAT 31-JAN-2002 selected organisms and promoters
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1 CATTCTGGAGTTTATTCTTGACCGCTCAGTATGCAGTGGTATAATAGTACAGTACTGTT

59

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59
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BM013229
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AQ726829
AA304949
AQ799774
BW056650
BX616097
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BY371805
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CN951547 Ha_mx0_49
AW945946 QV4_EN005
AW845451 MR1-CT005
CG768533 TCB49.3_D
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BW323630
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BY371615 BY371615
AQ738202 HS_3074_3
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2 HS 3074 A
5 BY371805
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9 HS: 5332 B
9 BST175959
4 HS 5264 B
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	AI810355 wb87f03.x	AA808838 nn47h10.r	AQ103607 HS 3069 B	N50575 yy89b04.r1	W49714 zc43e12.rl	CC281159 CH261-76K	BH130999 ENTNM19TF	BZ810251 PUGCH72TD	AZ546153 ENTFM87TR	BH165847 ENTRW35TF	••	AZ542127 ENTET82TR	BZ810249 PUGCH72TB	BU281873 603601774	CC863504 NDL.41P16	CC484887 CH240 314	AG575700 Mus muscu	CC904398 t014f18ba	CE557431 tigr-gss-	BH943899 odf17h08.

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ACCESSION
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840 GTATAATAGTACAGTACTGT 821
                               39 GTATAATAGTACAGTACTGT 58
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OGABT95TC ZM_0.7
genomic survey se
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Tel: 301-838-5843
Fax: 301-838-0208
Email: whitelaw@tigr.org
                                                                                                                                                                                                                                                                                                                                                        Seq primer: TF
Class: sheared ends.
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Other_GSSs: OGABT95TM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Whitelaw, C.A., Quackenbush, J., Van Aken, S., Utterback, T., Resnick, A., Fraser, C.M., Budiman, M.A., Bedell, J.A., Rohlfing, T., Citek, R.W., Nunberg, A., Robbins, D. and Lakey, N. Consortium for Maize Genomics
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Eukaryota; Viridiplantae; Streptophyta; Embryophyta; Tracheophyta; Spermatophyta; Magnoliophyta; Liliopsida; Poales; Poaceae; PACCAD clade; Panicoldeae; Andropogoneae; Zea.
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58
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Copyright (c) 1993 - 2005 Compugen Ltd.
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Post-processing: Listing first 45 summaries

Minimum DB Maximum DB

seq length: 0 seq length: 2000000000

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Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

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13010000	Lactococc	L. lactis	L. lactis	Human ost	Drosophil	Plasmid p	Vector pE	Plasmid p	. pEP25 vec	Xyl opera	Vector pE	L. lactis	Lambda CP	L. lactis	Lambda CP	Lactococc	Lactococc	Lactococc	Lactococc	

This is a Lactococcus lactis constitutional promoter sequence used in the construction of an artificial promoter library of the invention. The

Claim 28; Page 47; 89pp; English

New artificial promoter libraries - containing consensus promoter sequences and variable spacers, used to generate promoters for optimising expression of genes.

45	44	43	42	41	40	39	38	c 37	36	35	34	υ u	32	3 <u>1</u>	30	29	28	c 27	c 26	25	24	23	22	21
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ALIGNMENTS

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Lactococcus lactis.
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                                                                WPI; 1998-179062/16.
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                                                                                             (JENS/) JENSEN P R.
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REFERENCE AUTHORS TITLE ACCESSION VERSION KEYWORDS SOURCE ORGANISM RESULT 1 BD006945 ORIGIN LOCUS DEFINITION FEATURES COMMENT Query Match Best Local Similarity Matches 58; Conserv JOURNAL **Bource** PH CCC PR PR PO S derived from such libraries Patent: JP 2001503249-A 14 13-MAR-2001; PETER RUDAR JANSSEN BD006945.1 GI:18635316 BD006945 Artificial promoter libraries Artificial promoter libraries (bases 1 to 58) Lactococcus lactis JP 2001503249-A/14. Bacteria; Firmicutes; Lactobacillales; Streptococcaceae; 100.0%; Score 58; DB 6; 1 larity 100.0%; Pred. No. 5.4e-22; Conservative 0; Mismatches 0; Lactococcus lactis JP 2001503249-A/14 13-MAR-2001 promoter C12N15/09, C12N15/00 Strandedness: Double; Topology: Linear; KALIN HAMMER, PETER RUDAR JANSSEN 25-AUG-1997 JP 1998510287 23-AUG-1996 DK 0886/ from Location/Qualifiers (4)..(58). Location/Qualifiers 1. 58 /organism="Lactococcus lactis" /mol_type="genomic DNA" /db_xref="taxon:1358" such libraries. 0886/96 s for for selected DNA selected Length 58; organisms and promoters organisms PAT 31-JAN-2002

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1. 815 1. 815 1. 815 2	Other GSSs: CSU-K34.107K3.T7 CONTACT: Brendan Loftus Department of Eukaryotic Genomics TICR 9712 Medical Center Drive, Rockville, MD 20850, USA Tel: 301-838-3543 Fax: 301-838-0208 Email: enta@tigr.org Library was provided by Susan Brown and Dennis Knudson State University. Seq primer: SP6 Class: BAC ends.	1 GI:29961795 pypti (yellow fever mosquito) pypti pypti periode in the property of the proper	ALIGNMENTS CC097349 815 bp DNA linear G CSU-K34.107K3.SP6 CSU-K34 Addes aegypti genomic clone	29.3 459 2 BF401576 29.3 460 7 CN862162 29.3 470 6 CD995688 29.3 527 8 BIZ90054 29.3 548 7 CF922457 29.3 548 8 BIZ848371 29.3 557 5 BU551327	7 29.3 278 9 CC776736 CC7767 7 29.3 289 7 CC471509 CR471509 7 29.3 321 7 CN862720 CN8627 7 29.3 321 9 CG681691 BU5495 7 29.3 352 5 BU549582 AQ181303 AQ181307 7 29.3 396 2 BF870199 BF87019 7 29.3 396 2 BF870199 BU545490 7 29.3 407 5 BU545490 BU545490 7 29.3 411 4 BG726429 7 29.3 414 9 CC527321 CC527321 7 29.3 414 9 CC527316 AW719960 7 29.3 459 2 AW719960 AW719960 CC527314 CC527314 AW719960 AW719960 CC527314 CC52731
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Query Match Best Local Similarity

34.5%; Score 20; 100.0%; Pred. No.

DB 8; 1.7;

Length 815;

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Jensen

Hammer K;

23-AUG-1996; 25-AUG-1997; 26-FEB-1998.

96DK-00000886 97WO-DK000342

(JENS/) JENSEN P R. PR,

WPI; 1998-179062/16.

New artificial promoter libraries - containing consensus promoter sequences and variable spacers, used to generate promoters for optimising expression of genes.

This is a Lactococcus lactis constitutional promoter sequence used in the construction of an artificial promoter library of the invention. The

Claim 28; Page 48; 89pp; English

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Patent: JP 2001503249-A 15 13-MAR-2001;
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Hammer, K. and Janssen, P.R.
Artificial promoter libraries
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AQ869968 CR070604 CG285008	CN015220 CC669007	CG351222 BZ041217	CO795256	BZ967251	CC699626	CR226795	CK677143	BX126108	CO353327	CL834290	AQ576990	AZ366675	BQ778843	BZ302264
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REFERENCE AUTHORS TITLE JOURNAL ACCESSION VERSION KEYWORDS RESULT 1 BI259996 LOCUS DEFINITION SOURCE ORGANISM FEATURES Query Match Best Local Similarity source found through the I.M.A.G.E. Consortium/LLNL at: http://image.llnl.gov Plate: LLAM11270 row: m column: 24 Email: cgapbs-r@mail.nih.gov Tissue Procurement: ATCC 602972095F1 NIH_MGC_12 mRNA sequence. NIH-MGC http://mgc.nci.nih.gov/. National Institutes of Health, Mammalian Gene Collection (MGC) Homo sapiens (human) Homo sapiens BI259996 Contact: Robert Strausberg, Ph.D. Unpublished (1999) Eukaryota; Metazoa; Chordata; Mammalia; Eutheria; Primates; BI259996.1 GI:14817875 DNA Sequencing by: Incyte Genomics, Inc. Clone distribution: MGC clone distribution information can CDNA Library Preparation: Life Technologies, CDNA Library Arrayed by: Incyte Genomics, Inc (bases 1 to 1216) quality sequence /clone_lib="NIH_MGC_12" /note="Organ: cervix; Vector: pCMV-SPORT6; Site_1: NotI; Site_2: SalI; Cloned unidirectionally. Primer: Oligo dT. Average insert size 1.4 kb. Library prepared by Life Technologies." organism="Homo sapiens" /mol_type="mRNA" /db_xref="taxon:9606" ocation/Qualifiers :lone="IMAGE:5111615" :issue_type="cervical carcinoma cell line" ab host="DH10B" 36.2%; Score 21; Pred. No. 1216 bp mRNA linear EST 17-JUL-2001 Homo sapiens cDNA clone IMAGE:5111615 5', 162 Craniata; Vertebrata; Catarrhini; Hominidae; DB 4; 0.63; Length 1216; Euteleostomi; ; Homo.

COMMENT

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12 TTTTCTTGACAGGAGGGATCC 32

Matches

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Mismatches

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	26.7	26.7	26.7	26.7	26.7	26.7	26.7	26.7	26.7	26.7	26.7	26.7	26.7	26.7	26.7	26.7	26.7	26.7	26.7	26.7	26.7	26.7	28.3	28.3	28.3
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RESULT 1
AAV23188
Synthetic.
Lactococcus lactis.
                                                                                                                                                                                                             Lactococcus lactis; constitutional promoter; optimise; spacer; artificial promoter library; gene expression; ds.
                                                                                                                                                                                                                                                                           AAV23188 standard; DNA; 60
                                                                                   (JENS/) JENSEN P R.
                                                                                                  23-AUG-1996;
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                                                                                                                                           WO9807846-A1
                                                                                                                                                                      promoter
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                                                                                                  96DK-00000886.
                                                                                                               97WO-DK000342.
                                                                                                                                                                            Location/Qualifiers
                                                                                                                                                       standard_name= "Constitutional promoter"
                                                                                                                                                                                                                                                                           ВP
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This is a Lactococcus lactis constitutional promoter sequence used in construction of an artificial promoter library of the invention. The

Claim 28; Page 48; 89pp; English.

expression of

genes.

New artificial promoter libraries - containing consensus promoter sequences and variable spacers, used to generate promoters for optimising

WPI; 1998-179062/16.

Jensen PR,

Hammer K;

GenCore version 5.1.6 Copyright (c) 1993 - 2005 Compugen

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Result
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AL773573 Homo sapi
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ALIGNMENTS

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REFERENCE
AUTHORS
TITLE
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VERSION
KEYWORDS
SOURCE
ORGANISM
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source
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BD006947
LOCUS
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                                             Query Match
Best Local S
Matches 60
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1 CATITIGCTAGITTATTCTTGACATGAAGCGTGCCTAATGGTATATTACTTGAGTACTGTT
                                                                                                                                                                                 Similarity
                                                                                                                                                                                                                                                                                                                                   PETER RUDAR JANSSEN
                                                                                                                                                                                                                                                                                                                                                                      1 (bases 1 to 60)
Hammer, K. and Janssen, P.R.
Artificial promoter librar
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     BD006947 60 bp DNA linear PAT :
Artificial promoter libraries for selected organisms and
                                                                                                                                                                                                                                                                                                                                           Patent: JP 2001503249-A 16 13-MAR-2001;
                                                                                                                                                                                                                                                                                                                                                           derived from such libraries
                                                                                                                                                                                                                                                                                                                                                                                                                                          Lactococcus lactis
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     JP 2001503249-A/16.
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                                                                                                                                                                                                                                                                                                                                                                                                                        Bacteria; Firmicutes; Lactobacillales; Streptococcaceae;
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                                              Conservative
                                                                                                                                                                               promoter
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25-AUG-1997 JP 1998510287
23-AUG-1996 DK 0886/96
                                                                                                                                                                                                                                                                                                      Lactococcus lactis
JP 2001503249-A/16
                                                                                                                                                                                                                     Strandedness: Double;
                                                                                                                                                                                                         Popology: Linear;
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                                                                                                          /organism="Lactococcus lactis"
/mol_type="genomic DNA"
/db_xref="taxon:1358"
                                                                                                                                                                ocation/Qualifiers
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                                          Score 60; DB 6; Length 60; Pred. No. 1.1e-21; Mismatches 0; Indels
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s and promoters
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C 2 19 31.7 268 6 CD166614 CD166614 MM1-0005P CD266049 CD266049 CD260069 GM89007A1 38.3 1.7 1289 9 CG752793 CG752793 PG47-3-F0 CD260069 GM89007A1 3.1 7.3 1.2 8.3 1.2 8.5 1.2 8.5 1.2 8.5 1.2 8.3 1.2 8.5 1.2	1 1 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	Minimum DB seq length: 0 Maximum DB seq length: 2000000000 Post-processing: Listing first 45 summaries Database: RST.*	GenCore version 5.1.6 Copyright (c) 1993 - 2005 Compugen Ltd Coleic - nucleic search, using sw model n: June 20, 2005, 06:09:45; Search time 122 (without align 1862.095 Milli ct score: 60 CTTTGCTAGTTTATTCTTGTATATTACT ng table: OLIGO_NUC Gapop 60.0 , Gapext 60.0 hed: 34239544 seqs, 19032134700 residues size: 0
TICE	DEFINITION MM1-0005P-V006-B95-U, B MM1-0005 Schistosoma mansoni cDNA clone MM1-0005P-V006-B95-B, mRNA sequence. CD166614 VERSION CD166614 VERSION CD166614.1 GI:34703258 KEYWORDS SChistosoma mansoni Schistosoma mansoni Schistosoma mansoni Eukaryota; Metazoa; Platyhelminthes; Trematoda; Digenea; Strigeidida; Schistosomatoidea; Schistosomatidae; Schistosoma Strigeidida; Schistosomatoidea; Schistosomatidae; Schistosoma. REFERENCE 1 (Dases 1 to 268) Verjovski-Almedda,S., DeMarco,R., Martins,E.A.L., Guimaraes,P.E.M., Ojopi.E.P.B., Paquola,A.C.M., Piazza,J.P., Nishiyama,M.Y. Jr., Kitajima,J.P., Adamson,R.E., Ashton,P.D., Bonaldo,M.F., Coulson,P.S., Dillon,G.P., Farias,L.P., Gregorio,S.P., Ho,P.L., Nascimento,A.L.T.O., Ohlweiler,F.P., Reis,E.M., Kibbiro,M.A., Sa.R.G., Stukart,G.C., Soares,M.B., Gargioni,C., Kawano,T., Rodrigues,V., Madeira,A.M.B.N., Wilson,R.A., Menck,C.F.M., Setubal,J.C., Leite,L.C.C. and Diss Neto,E. Titter, Transcriptoma analyzis of the accolongte beneated.	ALIGNME	C 25 17 28.3 683 7 CN625364 CN625364 tameolail. 26 17 28.3 703 7 CP764101 CES004548 C 27 17 28.3 707 8 AZ977561 AZ977561 AZ977561 ZMM2B3D48 C 27 17 28.3 707 8 CC110884 C 29 17 28.3 746 8 CC110884 C 29 17 28.3 746 8 CC110884 C 29 17 28.3 812 9 CR033938 C 21 28.3 812 9 CR033938 C 21 28.3 812 9 CR033938 C 23 17 28.3 812 9 CR033938 C 33 17 28.3 847 8 AZ669235 AZ669235 ENTMS77TF C 34 17 28.3 845 9 AZ137692 P0174 B C 35 17 28.3 869 7 CC214789 C 36 17 28.3 869 7 CC214789 C 37 17 28.3 869 7 CC214789 C 38 16 26.7 254 6 CA829448 C 40 16 26.7 254 6 CA829448 C 40 16 26.7 261 9 CL891308 C 40 16 26.7 261 9 CL891308 C 41 16 26.7 261 9 CL891308 C 42 16 26.7 266 8 AZ303845 C 44 16 26.7 286 8 AZ303845 C 45 16 26.7 286 9 CE159286 C 25 15 25 26 CD330702 StrPu537.

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Minimum DB
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Aav23190 Lactococc
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RESULT 1
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                                                                          New artificial promoter libraries - containing consensus promoter sequences and variable spacers, used to generate promoters for optimising expression of genes.
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This is a Lactococcus lactis constitutional promoter sequence used in the construction of an artificial promoter library of the invention. The

Claim 28; Page 49; 89pp; English.

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Database
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ALIGNMENTS

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ACCESSION
VERSION
KEYWORDS
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OS Lactococcus lact
PN JP 2001503249-A/
PD 13-MAR-2001
PF 25-AUG-1997 JP 1.
PR 23-AUG-1996 DK
PR 23-AUG-1996 DK
PR KALIN HAMMER, PETI
PC C12N15/09, C12N15
CC Strandedness Dou
CC Topology: Linear
FH Key
PT promoter
1 CATGGGTGAGTTTATTCTTGACAGTGCGGCCNGGGGCTGATATCATAGCAGAGTACTATT
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Bacteria; Firmicutes; Lactobacillales;
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JP 2001503249-A/17.
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25-AUG-1997 JP 1998510287
23-AUG-1996 DK 0886/
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Location/Qualifiers
                                                                                                                           /organism="Lactococcus lactis"
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/db_xref="taxon:1358"
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REFERENCE AUTHORS ACCESSION VERSION KEYWORDS SOURCE ORGANISM RESULT 1 AV299623 LOCUS DEFINITION Owa, C. Ozawa, Y., Saito, H., Sano, M., Sato, K., Shibata, K., Shibata, Y., Shibata, Y., Shipemoto, Y., Shiraki, T., Sogabe, Y., Sugahara, Y., Suzuki, H., Takahashi, F., Tateno, M., Tominaga, N., Tsunoda, Y., Watahiki, A., Watanabe, S., Yamamura, T., Yasunishi, A. Yokota, T., Yoshiki, A., Yoshino, M., Muramatsu, M. and Hayashizak RIKEN Mouse ESTg (Konno, H., et al. 1999) AV299623 RIKEN full-length enriched, 8 d cDNA clone 5730470F16 3', mRNA sequence. AV299623 RIKEN full-length enriched, 8 d cDNA clone 5730470F16 3', mRNA sequence. AV299623 GI:6332114 EST. Fukuda, S., Fukunishi, Y., Hara, A., Hayatsu, N., Hirozane, T., Hori, F., Ishii, Y., Ishikawa, T., Itoh, M., Izawa, M., Kadota, K., Kagawa, I., Kai, C., Kawai, J., Kikuchi, N., Kojima, Y., Koya, S., Kusakabe, M., Matsuyama, T., Miki, R., Mizuno, Y., Nakamura, M., Oda, H., Okazaki, Y., Contact: Yoshihide Hayashizaki Bukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus. (bases 1 to 310) Konno, H., Aizawa, K., Akahira, S., Akiyama, J., Carninci, P., Endo, T., Mus musculus Mus musculus (house mouse) Nakamura, M., Oda, H., Okazaki, Y., M., Sato, K., Shibata, K., ..., ramamura,T., Yasunishi,A., Muramatsu,M. and Hayashizaki,Y. 1999) mRNA linear EST 10-NOV-1999 1, 8 days embryo Mus musculus

TITLE JOURNAL COMMENT

Laboratory for Genome Exploration Research Group, RIKEN Genomic Sciences Center(GSC), Yokohama Institute
The Institute of Physical and Chemical Research (RIKEN)
1-7-22 Suehiro-cho, Tsurumi-ku, Yokohama, Kanagawa 230-0045, Japan .-7-22 Suehiro-cho, el: 81-45-503-9222 81-45-503-9216

Smail: genome-res@gsc.riken.jp, URL:http://genome.gsc.riken.jp/
Sasaki,N., Izawa,M., Watahiki,M., Ozawa,K., Tanaka,T., Yoneda,Y.,
Sasaki,S., Carninci,P., Muramatsu,M., Okazaki,Y. and

Transcriptional sequencing: A method for DNA sequencing using RNA polymerase. Proc. Natl. Acad. Sci. U.S.A. 95 (7), 3455-3460 (1998) Itoh,M., Kitsunai,T., Akiyama,J., Shibata,K., Izawa,M., Kawai,J., Tomaru,Y., Carninci,P., Shibata,Y., Ozawa,Y., Muramatsu,M., Okazaki,Y. and Hayashizaki,Y. odawai,J., Ozawa,Y., Muramatsu,M., Okazaki,Y. and Hayashizaki,Y. and Hayashizaki,Y. 1999)

System. Genome Res. 9 (5), 463-470 (1999)

Carninci,P. and Hayashizaki,Y.

High-efficiency full-length cDNA cloning. Methods Enzymol. 303,

19-44 (1999)
Please visit our web site (http://genome.rtc.riken.go.jp) for

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ALIGNMENTS

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Lactococcus lactis.
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This is a Lactococcus lactis constitutional promoter sequence used in construction of an artificial promoter library of the invention. The

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Claim 28; Page 49; 89pp; English.

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1 CATTACCGAGTTTATTCTTGACACCGTTTATCGGGGTTGTATAATACTATAGTACTGTT 59

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ACCESSION VERSION KEYWORDS SOURCE ORGANISM PUBMED COMMENT REFERENCE AUTHORS TITLE RESULT 1 CC181212/c FEATURES ORIGIN DEFINITION Focus JOURNAL MEDLINE Query Match 35.6%; Best Local Similarity 100.0%; Matches 21; Conservative source CC181212

JSalBAC 0 G19 T7 Sal I (10-15 K genomic survey sequence.

CC181212

CC181212.1 GI:30353258 Email: maize@uga.edu Seq primer: T7 1057 Green Street, Athens, Tel: 706 542 9729 Fax: 706 583 0972 Yuan,Y., Sanmiguel,P.J. and Bennetzen,J.L. Methylation-spanning linker libraries link gene-rich regions identify epigenetic boundaries in Zea mays Genome Res. 12 (9), 1345-1349 (2002) Bukaryota; Viridiplantae; Streptophyta; Embryophyta; Tracheophyta; Spermatophyta; Magnoliophyta; Liliopsida; Poales; Poaceae; PACCAD clade; Panicoldeae; Andropogoneae; Zea. Zea mays Class: BAC ends. Department of Genetics University of Georgia Contact: 2213771 (bases 1 to 653) Bennetzen JL organism="Zea mays" /mol_type="genomic_DNA" /cultivar="B73" 1. .653 /clone_lib="Sal I (10-15 KB) BAC library" /note="Organ: young leaves; Vector: pBeloBACll" db xref="taxon:4577"
dev_stage="10 days seedling"
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This is a Lactococcus lactis constitutional promoter sequence used in the construction of an artificial promoter library of the invention. The
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REFERENCE AUTHORS TITLE ACCESSION VERSION KEYWORDS SOURCE ORGANISM RESULT 1
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LOCUS
DEFINITION ORIGIN FEATURES COMMENT Query Match Best Local (Matches JOURNAL source 60; Similarity derived from such libraries Patent: JP 2001503249-A 19 13-MAR-2001; PETER RUDAR JANSSEN 1 (bases 1 to 60)
Hammer, K. and Janssen, P.R.
Artificial promoter libraries for selected organisms and promoters Lactococcus lactis Lactococcus lactis Bacteria, Firmicutes, Lactobacillales, Streptococcaceae, Artificial promoter libraries derived from such libraries. JP 2001503249-A/19. BD006950.1 GI:18635321 BD006950 100.0%; ilarity 100.0%; Conservative 0; Lactococcus lactis JP 2001503249-A/19 13-MAR-2001 promoter Strandedness: Double; C12N15/09,C12N15/00 KALIN HAMMER, PETER RUDAR JANSSEN 25-AUG-1997 JP 1998510287 23-AUG-1996 DK 0886/ opology: Linear; /organism="Lactococcus lactis" /mol_type="genomic DNA" /db_xref="taxon:1358" location/Qualifiers 0, Location/Qualifiers (4). (60). Score 60; DB 6; Pred. No. 1.4e-22; ; Mismatches 0; 0886/96 60 bp ries for selected organisms and promoters DNA Length 60; Indels linear PAT 31-JAN-2002 0 Gaps ,

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1 20 33.3 421 1 AV549300 AV549323 AV549467 AV554467 AV549467 AV549461 AV539619 AV536619 AV536619 AV536619 AV536619 AV536619 AV539282 AV539242 AV539435 AV539435 AV5494306 AV552080 AV549461 AV539306 AV549461 AV539306 AV549461 AV54	Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution. SUMMARIES Result Query No. Score Match Length DB ID Pred. No. is the number of results predicted by chance to have a score of the result printed, and is derived by analysis of the total score distribution.	Post-processing: Listing first 45 summaries Database: EST:* 1: gb_est1:* 2: gb_est2:* 3: gb htc:* 4: gb_est3:* 5: gb_est3:* 6: gb_est6:* 7: gb_est6:* 8: gb_gss1:* 9: gb_gss2:*	Minimum DB seq length: 0 Maximum DB seq length: 2000000000	34239544 seqs, 19032134700 residues 0	table: OLIGO_NUC Gapop_60.0 , Ga	Title: US-09-242-657B-19 Perfect score: 60 Sequence: 1 CATGTAGGAGTTTATTCTTGTATAATATCTCAGTACTGTT 60	Run on: June 20, 2005, 06:09:45; Search time 1226.5 Seconds (without alignments) 1862.095 Million cell updates/sec	Copyright (c) 1993 - 2005 Compugen Ltd. OM nucleic - nucleic search, using sw model	GenCore version 5.1.6
The First Kazusa DN Yana 1533 Email: as S urce Match Local Similari Ess 20; Cons 9 AGTTTAT	AUTHORS Asamizu, E., M AUTHORS Asamizu, E., M TITLE A large scale of 12,028 mon of 12,028 mon of 20,028 mon of 20,028 mon sceedleded JOURNAL DNA Res. 7 (3 MEDLINE 20363093 PUBMED 10907847 COMMENT Contact: Erik	AV549300 Ara CDNA clone AV549300 Ara AV549300 A AV549300.1 EST. Arabidopsis Arabidopsis Eukaryota; V Spermatophyt rosids; euro		18 18 18	18 18 18		19 19 19	20 33.3 29 20 33.3 29 20 33.3 20 33.3	200

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AV549300

AV549300 Arabidopsis thaliana roots Columbia Arabidopsis thaliana cDNA clone R206a02R 5', mRNA sequence.

ACCESSION AV549300.1 GI:8720713

KEYMORDS SOURCE Arabidopsis thaliana (thale cress)

FORGANISM Exposed thaliana (thale cress)

AUFHORS Arabidopsis thaliana (thale cress)

AUFHORS ARABICULT. (Nakamira, Y., 1940.)

AUFHORS Alarge scale analysis of CDNA in Arabidopsis thaliana: Generation of 12,028 non-redundant expressed sequence tags from normalized and size-selected CDNA libraries

DNA Ress. 7 (3), 175-180 (2000)

PUDNED 103093

COMMENT

The First Laboratory for Plant Gene Research (Xarusa DNA Research Thatitute Yana 1532-3, Kisarazu, Chiba 292-0812, Japan Email: asamizu@karusa.or.jp, URL:http://www.kazusa.or.jp/en/plant/. Comments of Columbia**

FATURES Source (Columbia

JOURNAL COMMENT

The First Laboratory for Plant Gene Research (Xarusa DNA Research Thatitute Yana 1532-3, Kisarazu, Chiba 292-0812, Japan Email: asamizu@karusa.or.jp, URL:http://www.kazusa.or.jp/en/plant/.

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This is a Lactococcus lactis constitutional promoter sequence used in construction of an artificial promoter library of the invention. The

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Claim 28;

Page 50; 89pp;

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AL391726
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Query Match Best Local Matches 6	source ORIGIN	FEATURES		JOURNAL	REFERENCE AUTHORS TITLE	ACCESSION VERSION KEYWORDS SOURCE ORGANISM	RESULT 1 BD006951 LOCUS DEFINITION
h 100.0%; Score 60; DB 6; Length 60; Similarity 100.0%; Pred. No. 9.1e-23; 60; Conservative 0; Mismatches 0; Indels 0; Gaps 0;	160 /organism="Lactococcus lactis" /mol_type="genomic DNA" /db_xref="taxon:1358"		PN JP 201503249-A/20 PD 13-MAR-2001 PD 25-AUG-1997 JP 1998510287 PR 23-AUG-1996 DK 0886/96 PR 23-AUG-1996 DK 0886/96 PR 1 KALIN HAMMER, PETER RUDAR JANSSEN PC C12N15/09 C12N15/00	TER	Lactococcus. 1 (bases 1 to 60) Hammer, K. and Janssen, P.R. Artificial promoter libraries for selected organisms and promoters	1.1 GI:18635322 503249-A/20. ccus lactis ccus lactis	BD006951 60 bp DNA linear PAT 31-JAN-2002 Artificial promoter libraries for selected organisms and promoters derived from such libraries.

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1 CATGGGTAAGTTTATTCTTCACACTATCTGGGCCCGATGGTATAATAAGTGACTACTGTT

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RESULT 2 CR232325 LOCUS REFERENCE AUTHORS ACCESSION
VERSION
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VERSION
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ORGANISM 밁 DEFINITION ORIGIN FEATURES Query Match Best Local S Matches 19 TITLE JOURNAL source N Reverse strand read from insert in 5-chromosome engineering clone MHPN75n(CR232325 CR232325 CR232325.1 GI:50011174 GSS; genome survey sequence; MICER. Mus musculus (house mouse) 254 GGTAAGTTTATTCTTCACA 272 19; CR189011 649 bp DNA linear GSS 06-JUL-200 Reverse strand read from insert in 5'HPRT insertion targeting and Chromosome engineering clone MHPN349c07, genomic survey sequence. 5 GGTAAGTTTATTCTTCACA 23 Submitted (20-FEB-2004) Sanger Centre, Hinxton, CB10 1SA, UK. http://www.sanger.ac.uk/MICER Location/Qualifiers Direct Submission I (bases 1 to 649)
Adams, D.J., Biggs, P.J., Cox, A.V.,
Jonkers, J., Smith, J., Plumb, R.W.,
Rogers, J. and Bradley, A. Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus Mus musculus GSS; genome survey sequence; MICER CR189011 CR189011.1 GI:49967860 CR232325 Mus musculus (house mouse) Similarity 100. 19; Conservative /organism="Mus musculus"
/mol type="genomic_DNA"
/db_xref="taxon:10090"
/clone="MHENN349c07"
/clone_lib="MHENN" 31.7%; Score 19; DB 9; 100.0%; Pred. No. 4.5; Live 0; Mismatches 684 bp DNA linear GSS 06-JUL-2004 from insert in 5'HPRT insertion targeting and ing clone MHPN75n04, genomic survey sequence. Davies,R.M., Taylor,R.G., Length 649 van der Weyden,L.,
Nishijima,I., Yu,Y., Cambridgeshire, GSS 06-JUL-2004 0 Gaps 0

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ADG87655	ADG87654	ABZ13652	ABN99221	ABQ60231	ABS10407	ABS36027	AAK10445	AAK36347	AAI42073	ABA62126	ABA11399	AAC78401	ACD13867	ABK98616	ACD13877	ABK98626	ACD13866	ABK98615	ACD13856	ABK98605	ACD13855	ABK98604	AAV23199	AAV23200
Þ		Abz13652 Arabidops		Abq60231 Human col	Abs10407 Human gen	Abs36027 Human liv	Human	Aak36347 Human bon	Aai42073 Probe #10	Aba62126 Human foe	Aball399 Human ner	Aac78401 Human can	Acd13867 L. lactis	Abk98616 L. lactis	L. lact	Abk98626 L. lactis	Acd13866 L. lactis		Acd13856 L.lactis		L.1	Abk98604 L. lactis	Aav23199 Lactococc	Aav23200 Lactococc

ARESULT 1 ANAV31193 ADV31193 A Synthetic. Lactococcus Lactococcus lactis; artificial promoter 28-JUL-1998 AAV23193; AAV23193 standard; DNA; 59 Lactococcus lactis constitutional promoter Cp25 lactis (first entry) constitutional promoter; optimise; spacer; library; gene expression; ds. ₽P.

ALIGNMENTS

23-AUG-1996; 25-AUG-1997; WO9807846-A1 promoter 26-FEB-1998 96DK-00000886. 97WO-DK000342. Location/Qualifiers standard_name= "Constitutional" *tag= promoter"

sequences and expression of New artificial promoter libraries - sequences and variable spacers, used genes. used containing consensus promoter to generate promoters for optimising WPI; 1998-179062/16. Jensen PR, Hammer K;

(JENS/) JENSEN P R.

Claim 28; Page 50; 89pp; English.

This is a Lactococcus lactis constitutional promoter sequence used in the construction of an artificial promoter library of the invention. The

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Result
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REFERENCE AUTHORS TITLE RESULT 1 BD006952 LOCUS DEFINITION VERSION KEYWORDS SOURCE FEATURES COMMENT ACCESSION Query Match JOURNAL ORGANISM source 1 (bases 1 to 59) Hammer, K. and Janssen, P.R. Artificial promoter libraries for selected derived from such libraries Patent: JP 2001503249-A 21 13-MAR-2001; Lactococcus lactis BD006952.1 GI:18635323 derived from such libraries Artificial promoter libraries 100.0%; larity 100.0%; Conservative 0; RUDAR JANSSEN Lactococcus lactis JP 2001503249-A/21 C12N15/09,C12N15/00 Strandedness: Double; 13-MAR-2001 25-AUG-1997 JP 1998510287 23-AUG-1996 DK 0886/ Copology: Linear; CALIN HAMMER, PETER RUDAR JANSSEN /organism="Lactococcus lactis" /mol_type="genomic DNA" /db_xref="taxon:1358" ocation/Qualifiers Firmicutes; Lactobacillales; Streptococcaceae; Location/Qualifiers Score 59; DB 6; Pred. No. 2.1e-23; Mismatches 0; s for selected organisms and promoters Length 59; organisms and promoters linear PAT 31-JAN-2002

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AL253658 Tetraodon
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CL022502 CH216-14I
BH356393 CH230-82D
BF755829 CM3-CT057
BJ59819 BJ598819
N58914 YY61e12.81
AV967751 AV967751
CQ481889 GQ0194.TB
BJ313250 BJ313250
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CC207763 WS0093.B2
BJ602198 BJ602198
BW774089 BW274089
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	FEATURES source									COMMENT	JOURNAL	TITLE	AUTHORS	REFERENCE		SOURCE	KEYWORDS	VERSION		LOCUS
/organism="Sus scrofa" /mol_type="genomic DNA" /strain="four pigs (breed: 37.5% Yorks Landrace and 25% Meishan)" /db xref="taxon:9823" /clone="RPC144_344J4"	Class: BAC ends. Location/Qualifiers 1445	Initiative) Plate: 344 row: J column: 4 Sec primer: T7	University of Illinois at Urbana Champaign, USA with funds provided by grant No. AG2002-34480-11828 from USDA-CSREES and AG2001-35205-09965 from USDA/NRI (Livestock Genome Sequencing	of the International Swine Genome Sequencing Consortium by	(http://www.bacpac.chori.org/porcine242.htm). For BAC library availability, please contact Pieter de Jong (pdejong@chori.org).	rdx: 21/244 561/ Email: schook@uiuc.edu Clones are derived from the nornine BNC library DDCI-44	Tel: 217 265 5926	University of Illinois at Urbana Champaign	Contact: Lawrence B. Schook Department of Animal Sciences	Other GSSs: RPCI44 344J4.r	Through Comparative Genomics	Piggy-BACing the Human Genome: Constructing a Porcine Physical Map	Rogatcheva, M.B., Meyers, S., He, W., Larkin, D.M., Marron, B.M.,	odactyla; Suina; Suidae;	Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;	Sus scrofa (pig) Sus scrofa	•	CL361142.1 GI:51413112	survey	CL361142 445 bp DNA linear GSS 19-AUG-2004 PDCT44 144.T4 f PDCT-44 Sine scrope commis close prottal 24.T4

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	Adg87654 A. thalia	Abz13652 Arabidops	Ade56168 Rat gene	Adk62321 Disease t	Abn99221 Arabidops	Adk57424 Plant DNA	S			Aav23200 Lactococc	Aav23188 Lactococc	Aav23210 Lactococc	•	Acd13843 Plasmid p					-		•	Acd13883 L. lactis		_	Aak81851 Human imm

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RESULT 1
AAV23194
ID AAV2
New artificial promoter libraries - sequences and variable spacers, use expression of genes.
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                                                                                                                               23-AUG-1996;
                                                                            WPI; 1998-179062/16.
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                                                                                                                                                                                                                        promoter
                                                                                                                                                                                                                                                            Synthetic
                                                                                                                                                                                                                                                                           Lactococcus lactis; constitutional promoter; optimise; spacer; artificial promoter library; gene expression; ds.
                                                                                                                                                                                                                                                                                                        Lactococcus lactis constitutional promoter Cp26
                                                                                                                                                                                                                                                                                                                          28-JUL-1998 (first entry)
                                                                                                                                                                                                                                                                                                                                             AAV23194;
                                                                                                               (JENS/) JENSEN P R.
                                                                                                                                                                                                                                                   Lactococcus
                                                                                             Hammer K;
                                                                                                                                                                                                                                                    lactis.
                                                                                                                                96DK-00000886
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/*tag=
                                                                                                                                                 97WO-DK000342
                                                                                                                                                                                                                                Location/Qualifiers
                                                                                                                                                                                                     /standard_name= "Constitutional promoter"
                                                 containing consensus promoter to generate promoters for optimising
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This is a Lactococcus lactis constitutional promoter sequence used in the construction of an artificial promoter library of the invention. The

Claim 28; Page 51; 89pp; English.

used

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Minimum DB
Maximum DB
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AC127513 Homo sapi
AC142552 Danio rer
AC142550 Danio rer
BX08856 Zebrafish
AC005562 Homo sapi
AC099781 Homo sapi
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AL713914 Mouse DNI
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                                                                                                                                                                                                                                                          Description
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Patent: JP 2001503249-A 22 13-MAR-2001;
PETER RUDAR JANSSEN
                                                                                                                     BD006953.1 GI:18635324
JP 2001503249-A/22.
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Hammer, K. and Janssen, P.R.
Artificial promoter libraries for selected
                                                                                                                                                                                                                                                                                                                                               Lactococcus lactis
            Similarity
                                                                                                                                                                                                                                                                                                                                                                                                           derived from
                                                                                                                                                                                                                                                                                                                                                                                                                     Artificial promoter libraries
                                                                                                                                                                                                                                                                                                                                   Bacteria; Firmicutes; Lactobacillales; Streptococcaceae;
                                                                                                                                                                                        Lactococcus lactis
JP 2001503249-A/22
13-MAR-2001
25-AUG-1997 JP 1998510287
23-AUG-1996 DK 0886/96
100.0%;
ilarity 100.0%;
Conservative 0;
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Strandedness: Double;
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                                                                                                        location/Qualifiers
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                                                                                                                  Location/Qualifiers (4). (60).
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; Mismatches 0;
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		U27999 U27999 Epst AI796482 wil8f04.x	U27999 AI796482			28	17	c 15
		CC298357 CH261-146	CC298357			30.	18	
			AG532613 BF977586		0 746 0 892	30.0	18 18	c 11
Bource		AZ976321 2M0251N11	AZ976321	80		30.	18	c 10
FEATURES			BX127652		0 656	30.	18 18	0 00
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			ng sw model	ı, using	search,	nuclèic	•	OM nucleic
		mpugen Ltd.	- 2005		Copyright	.0		
		5.1.6	GenCore version 5.			,		

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BG888975 EST51482		•	17	38
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BX215823 Danio rer		•	17	32
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		•	17	30
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AI920068 1598 Pine		•	17	28
	450 8 AQ884083	•	17	27
AW015492 UI-H-BIO-		•	17	26
AI872271 tz62h07.x	399 1 AI872271		17	25

N58914 N58914 ON yy61e12.sl Soares multiple sclerosis 2NbHMSP Homo sapiens cDNA clone IMAGE:278062 3', mRNA sequence. ON N58914 N58914.1 GI:1202804 EST. Homo sapiens (human) Homo sapiens Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo. 1 (bases 1 to 437) RS Hillier,L., Clark,N., Dubuque,T., Elliston,K., Hawkins,M.,

ALIGNMENTS

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	source
Location/Qualifiers	JRES
High quality sequence stop: 1.	
Seq primer: mob.REGA+ET	
IMAGE Consortium (info@image.llnl.gov) for further information.	
This clone is available royalty-free through LLNL; contact the	
Email: est@watson.wustl.edu	
Fax: 314 ·286 1810	
Tel: 314 286 1800	
4444 Forest Park Parkway, Box 8501, St. Louis, MO 63108	
Washington University School of Medicine	
Contact: Wilson RK	ENT
Unpublished (1995)	URNAL
The WashU-Merck EST Project	ILE
Wilson, R.	
Trevaskis, E., Waterston, R., Williamson, A., Wohldmann, P. and	
Parsons, J., Rifkin, L., Rohlfing, T., Soares, M., Tan, F.,	
Holman, M., Hultman, M., Kucaba, T., Le, M., Lennon, G., Marra, M.,	
Hillier, L., Clark, N., Dubuque, T., Elliston, K., Hawkins, M.,	THORS
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Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.	
sukaryota; metazoa; chordata; craniata; vertebrata; suteleostomi;	

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/note="Vector: pT7T3D (Pharmacia) with a modified
/note="Vector: pT7T3D (Pharmacia) with a Not I; Site_2: Eco
RI; let strand cDNA was primed with a Not I - oligo(dT)
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GenCore version 5.1.6 Copyright (c) 1993 - 2005 Compugen Ltd

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Minimum DB
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Abx54585 Bovine ES
Abx53893 Human pro
Abk95277 Human pro
Aad47003 Plasmodiu
Abk95278 Human pro
Aca33365 Prokaryot
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Adl13825 Osteoarth
Aaq23880 pKTH1820
Aaq46205 Promoter
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Abl29743 Drosophil
Abl15583 Drosophil
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Aaz49723 Staphyloc
Acf36709 S. simula
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Aac95157 Cat flea		Adb51088 Primary r	Abk76445 Bacillus	Abd06404 Pseudomon	Aaa42899 Human sec	Acd13868 L. lactis	Abk98617 L. lactis		Abk98627 L. lactis	Adq42111 Myocardia	F	F	۲	Abk98626 L. lactis	Aav23213 Lactococc			Continuation (3 of	0	Abl29742 Drosophil				Abl15582 Drosophil

RESULT 1 AAV23195 ID AAV2 ID AAV2 AC AAV2 AC AAV2 AC AAV2 DT 28-J XX Lact XX Lact XX Lact XX Exprt OS FT Prom FT Prom FT Prom FT Prom FT Prom FT 25-A XX Y GIEN XX Y GIEN XX WPI; XX WO98 AX GIEN XX WO98 AX GIEN XX G Lactococcus lactis; artificial promoter promoter Synthetic. Lactococcus lactis constitutional promoter Cp28 28-JUL-1998 AAV23195; AAV23195 standard; DNA; 60 BP. Lactococcus lactis. (first entry) Location/Qualifiers /*tag= . 60 constitutional promoter; optimise; spacer; library; gene expression; ds.

ALIGNMENTS

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2,	WO9807846-A1.			
0 %	26-FEB-1998.		,	
4) 24	25-AUG-1997:	97WO-DK000342		
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	WPI; 1998-179062/16.	62/16.		

Claim 28; Page 51; 89pp; English.

sequences and expression of

genes

New artificial promoter libraries - of sequences and variable spacers, used

containing consensus promoter to generate promoters for optimising

This is a Lactococcus lactis constitutional promoter sequence used in the construction of an artificial promoter library of the invention. The

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Database :
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AC090569 Homo sapi
AC009137 Homo sapi
AC150652 Bos tauru
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AL139406 Human DNA
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Homo sapi
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Hammor, K. and Janssen, P.R.
Artificial promoter libraries for selected organisms and promoters
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Lactococcus lactis
                     Similarity
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100.0%; Score 60; DB 6; ilarity 100.0%; Pred. No. 5.3e-24; Conservative 0; Mismatches of
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JP 2001503249-A/23
13-MAR-2001
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C12N15/09,C12N15/00
Strandedness: Double;
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23-AUG-1996 DK 0886/
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JP 2001503249-A 23 13-MAR-2001;
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CB925588

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BG844674 1024007D0
CB925588 BAB1 22_F
AQ021759 CIT-HSP-2
BX123136 Damio rer
CE484970 tigr-gss-
CR396152 Arabidops
C93685 C93685 Dict
CB927620 ABA1 27_D
BQ313337 RCO-EM032
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BE713377 MRI HT071
AQ475793 CITBI-E1-
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AG252334 Lotus cor
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	e w		K H	AZ198221 LOCUS LOCUS DEFINITION SP 1037 A1 Urchin, sp genomic cl ACCESSION AZ198221 VERSION AZ198221.1 KETWANDEN GS
/organism="Strongylocentrotus purpuratus" /mol_type="genomic DNA"	of Biology 156-29 ia Institute of Technology California 91125, USA 6) 395-8421 6) 793-3047 cameron@caltech.edu 237 row: K column: 13 25r: SP6 AC ends Lication/Qualifiers	1,S., Wallace,J.C., Poustka,A.J., Livingstr., Ettensohn,C.A., Lehrach,H., Britten,R.J.,L. chin genome project: Sequence scan, virtual al resources al resources tl. Acad. Sci. U.S.A. 97 (17), 9514-9518 (2000)	Strongylocentrotus purpuratus Strongylocentrotus purpuratus Strongylocentrotus purpuratus Eleutherozoa; Echinozoa; Eukaryota; Metazoa; Echinodermata; Eleutherozoa; Echinozoa; Echinoidea, Echinoidea, Echinoidea, Echinoidea, Strongylocentrotidae; Strongylocentrotus. Strongylocentrotidae; Strongylocentrotus. 1 (bases 1 to 484) Cameron, R. A., Mahairas, G., Rast, J.P., Martinez, P., Biondi, T.R.,	AR198221 AR198221 AR198221 AR198221 AR2198221 AR2198221 AR2198221 AR2198221 AR2198221 AR2198221 AR2198221.1 GI:8392046 AR2198221.1 GI:8392046

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Aad46539 Human amy
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Aak66425 Human imm
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Abd33824 Mouse can
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AAV23196
ID AAV;
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RESULT 1
                                                New artificial promoter libraries - containing consensus promoter sequences and variable spacers, used to generate promoters for op-
                                                                               WPI; 1998-179062/16.
                                                                                                Jensen PR, Hammer K;
                                                                                                                                     23-AUG-1996;
                                                                                                                                                       25-AUG-1997;
                                                                                                                                                                                                                                promoter
                                                                                                                                                                         26-FEB-1998.
                                                                                                                                                                                           WO9807846-A1
                                                                                                                                                                                                                                          Key
                                                                                                                                                                                                                                                                    Synthetic.
                                                                                                                                                                                                                                                                                                                                    28-JUL-1998
                                                                                                                                                                                                                                                                                                                                                     AAV23196;
                                                                                                                                                                                                                                                                                     Lactococcus lactis; constitutional promoter; optimise; spacer; artificial promoter library; gene expression; ds.
                                                                                                                                                                                                                                                                                                                Lactococcus lactis constitutional promoter Cp29
                                                                                                                                                                                                                                                                                                                                                                       AAV23196 standard; DNA; 59 BP.
                                                                                                                  (JENS/) JENSEN PR.
                                                                                                                                                                                                                                                            Lactococcus lactis.
                                                                                                                                                                                                                                                                                                                                    (first entry)
                                                                                                                                     96DK-00000886
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                                                                                                                                                                                                           /standard_name= "Constitutional promoter"
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This is a Lactococcus lactis constitutional promoter sequence used in the construction of an artificial promoter library of the invention. The

sequences and variable expression of genes.

optimising

Claim 28;

Page 52; 89pp; English.

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Result
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AP000760 Homo sapi
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AC103453 Homo sapi
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Query Match Best Local Matches 5	FEATURES SOUICE	REFERENCE AUTHORS TITLE JOURNAL COMMENT	RESULT 1 BD006955 LOCUS DEFINITION ACCESSION VERSION VERSION KEYWORDS SOURCE ORGANISM
/ Match 100.0%; Score 59; DB 6; Length 59; Local Similarity 100.0%; Pred. No. 2.5e-23; les 59; Conservative 0; Mismatches 0; Indels 0; Gaps 0;	H C C C C C C F F F F F F F F F F F F F	1 (bases 1 to 59) 1 artificial promoter libraries for selected organisms and promoters derived from such libraries Patent: JP 2001503249-A 24 13-MAR-2001; PETER RUDAR JANSSEN OS Lactococcus lactis PN JP 2001503349-A/24	
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JOURNAL COMMENT RESULT 1
BH202020
LOCUS
DEFINITION REFERENCE AUTHORS ACCESSION VERSION KEYWORDS SOURCE ORGANISM FEATURES TITLE source State University of New York, (loverde@buffalo.edu) Clones are derived from the Schistosoma mansoni (Puerto Rico) BAC library. For clone availability, please contact Dr. Najib El-Sayed at TIGR (nelsayed@tigr.org) or Dr. Phillip LoVerde at Department of Eukaryotic Genomics The Institute for Genomic Research 9712 Medical Center Dr., Rockville, Other GSSs: Sm1-55E8.TF Contact: Najib M. El-Sayed BH202020 836 bp L Sml-55E8.TR Sml Schistosoma mansoni Unpublished Eukaryota; Metazoa; Platyhelmini Strigeidida; Schistosomatoidea; Schistosoma mansoni Schistosoma mansoni BH202020.1 Email: nelsayed@tigr.org primer: M13 Rev ss: BAC ends. (bases 1 to 836) BAC library Medical Center Dr., 301 838 0200 301 838 0208 sequence. /Clone lib="Sml"
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'strain="Puerto Rico" organism="Schistosoma ocation/Qualifiers db_xref="taxon:6183" clone="Sm1-55B8" sequences from Schistosoma mansoni (Puerto Rico strain) Simpson, A., Malek, J., GI:16374025 Platyhelminthes; Trematoda; Diosomatoidea; Schistosomatidae; gene discovery Buffalo, Koo, H., LoVerde, P.T. and and map construction DNA ₹ genomic clone Sm1-55E8, Trematoda; Digenea; stosomatidae; Schistosoma. r Dr. Phill New York, 20850, USA linear GSS 15-NOV-2002 at genomic Sml

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                                                                                                                Aav23214 Lactococc
Aav23212 Lactococc
Aav23205 Lactococc
Continuation (4 of
Aav23190 Lactococc
                                                                                                                                                                                                                                                                         Description
                                                                                                                                                                                                                                   Aav23184 Lactococc
                                                                                                                                                                                 Aav23182
                                                                                                                                                                                                          Aav23209 Lactococc
                                                                                                                                                                                                                                               Aav23197 Lactococc
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L. lactis
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ABA90521_00	AAX57351	ABQ67005	ABS55502	ACD13885	ABK98634	ABQ67068	ABA94342	AD052589	AD052587	ABK88555	ABK88554	ADP72774	ADB52709	ADF50636	AD052591	AD052590	ABK88556	ABK88557	ADS51253	AAF13601	AD052584	AD052586	ABK88553	ABK88552
. Aba90521 Ge		Abq67005 Hu	Abs55502 Sw	Acd13885 L.		Abq67068 Hu	Aba94342 Ca	Ado52589 Dog COX-2	Ado52587 D	Abk88555 Do	Abk88554 DN	Adp72774 R	Adb52709 P:	Adf50636 M	Ado52591 Dog COX-2	Ado52590 Do	Abk88556 Dog	" Abk88557 Dog	Ads51253 Bacterial	Aaf13601 Aspergill	Ado52584 Do	Ado52586 Dog COX-2	Abk88553 Dog	Abk88552 DNA
Genomic s	Human chr	Human ang	Sweetgum	lactis	Vector pE	Human ang	Canine cy	og COX-2	og COX-2	Dog prost	DNA encod	Renal tox	Primary r	urine DN	og COX-2	og COX-2	Dog prost	Dog prost	acterial	pergill	og COX-2	og cox-2	g prost	A encod

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RESULT 1
AAV23197
ID AAV2
Jensen PR,
                                                                                                           23-AUG-1996;
                                                                                                                          25-AUG-1997;
                                                                                                                                         26-FEB-1998.
                                                                                                                                                        WO9807846-A1
                                                                                                                                                                                     promoter
                                                                                                                                                                                             Key
                                                                                                                                                                                                                   Synthetic
                                                                                                                                                                                                                                 Lactococcus
artificial p
                                                                                                                                                                                                                                                       Lactococcus lactis constitutional promoter Cp3
                                                                                                                                                                                                                                                                     28-JUL-1998
                                                                                                                                                                                                                                                                                    AAV23197;
                                                                                                                                                                                                                                                                                                   AAV23197 standard; DNA; 60 BP
                                                                                                                                                                                                           Lactococcus
                                                                                            (JENS/) JENSEN P R.
                                                                                                                                                                                                                                 promoter
                                                                              Hammer K;
                                                                                                                                                                                                            lactis.
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                                                                                                           96DK-00000886.
                                                                                                                          97WO-DK000342
                                                                                                                                                                                           Location/Qualifiers
                                                                                                                                                                     /*tag= a
/standard_name= "Constitutional promoter"
                                                                                                                                                                                                                                constitutional promoter; optimise; spacer; library; gene expression; ds.
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This is a Lactococcus lactis constitutional promoter sequence used in construction of an artificial promoter library of the invention. The

the

New artificial promoter libraries - sequences and variable spacers, used expression of genes.

es - containing consensus promoter used to generate promoters for optimising

WPI; 1998-179062/16.

Claim 28; Page 52; 89pp; English.

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Result
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AL049781 Human chr
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AC103167 Rattus no
AC1011483 Rattus no
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DEFINITION
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1 CATCCTGTAGTTTATTCTTGACACACGTNNTTAGCTGTGGTATAATAGGAGGAGTACTGTT
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JP 2001503249-A/25.
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Artificial promoter libraries
                                                                                                                                                                                                                                                                                                                                                              Patent: JP 2001503249-A 25 13-MAR-2001;
PETER RUDAR JANSSEN
                                                                                                                                                                                                                                                                                                                                                                                                                           1 (bases 1 to 60)
Hammer, K. and Janssen, P.R.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Lactococcus lactis
                                                                                                                                                                                                                                                                                                                                                                                           derived from such libraries
                                                                                                                                                                                                                                                                                                                                                                                                           Artificial promoter libraries for selected
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Bacteria; Firmicutes; Lactobacillales; Streptococcaceae;
                                                           Similarity
                                           100.0%; Score 60; DB 6; 1
Larity 100.0%; Pred. No. 1.6e-23;
Conservative 0; Mismatches 0;
                                                                                                                                                                                              promoter
                                                                                                                                                                                                                                       C12N15/09,C12N15/00
Strandedness: Double;
                                                                                                                                                                                                                                                                                    13-MAR-2001
25-AUG-1997 JP 1998510287
23-AUG-1996 DK 0886/
                                                                                                                                                                                                                                                                                                                                 Lactococcus lactis JP 2001503249-A/25
                                                                                                                                                                                                                          Fopology: Linear;
                                                                                                                                                                                                                                                                      KALIN HAMMER, PETER RUDAR JANSSEN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            from such libraries.
                                                                                                                   /organism="Lactococcus lactis"
/mol_type="genomic DNA"
/db_xref="taxon:1358"
                                                                                                                                                                             Location/Qualifiers
                                                                                                                                                                                             Location/Qualifiers (4). .(60).
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seq length: 2000000000
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Gapop 60.0 , Gapext 60.0
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60
  CATCCTGTAGTTTATTCTTG.....TATAATAGGAGAGTACTGTT 60
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Copyright (c) 1993 - 2005 Compugen Ltd.
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AG314075
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AW885019
BB385117
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BH748487
AQ644596
CC0389779
CD195972
AQ708599
AQ021951
CL385047
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RPCI44_33
7 IA8-2571
GROADABB
1kf67b07.
1kf67b07.
NIS MUSCU
2MMBB0119
602142277
Tm ad 40A
QV4-07006
B038-5110
NISC m110
NISC m110
AV765566
CH230-266
BP078576
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HS 5362 A
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26.7	26.7	26.7	26.7	26.7	26.7	26.7	26.7	26.7	26.7	26.7	26.7	26.7	26.7	26.7	26.7	26.7	26.7	26.7	26.7	26.7
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CK611066	AA495704	BF408442	CK610424	BP059177	CK607709	BY386797	AA892975	CF255297	BP049722	AZ160972	BP054087	BM418766	BP638705	AQ710557	AI232299	BP072143	C13483 C	BY494143	AZ602750	D75498 C
IFNi_D11	pat.pk000	UI-R-BJ2-	IFNd E13	BP059177	.Controlb_	BY386797	EST196778	mdvn126_e	BP049722	SP_0067_B	BP054087	R004D11 O	BP638705	HS_5345_A	EST228987	BP072143	13483 C13483 Yuji	BY494143	AZ602750 1M0421J08	D75498 CELK105D1F

ORIGIN	i.		Bource	FEATURES .						COMMENT	B		JOURNAL	TITLE		AUTHORS	REFERENCE		MSIN	SOURCE		ON		ITION	89/c	RESULT 1
	/sex="male" /clone_lib="CIT Approved Human Genomic Sperm Library D" /note="Organ: sperm; Vector: pBeloBAC11; BAC Clones in E-Coli DH10B"	<pre>/mol type="genomic DNA" /db xref="taxon:9606" /clone="plate=2005 Col=24 Row=D"</pre>	1392 /organism="Homo sapiens"	High quality sequence stop: 392. Location/Qualifiers	Plate: 2005 row: D column: 24 Class: BAC ends	small: Jwallacewn.wasningcon.equ Sequence Tagged Connector	Fax: (206) 616-3887	401 Queen Anne Avenue North, Seattle, WA 98109, USA	. 61	Contact: Mahairas GG, Wallace JC, Hood L		99380589	Proc. Natl. Acad. Sci. U.S.A. 96 (17), 9739-9744 (1999)	Sequence-tagged connectors: A sequence approach to mapping and	<pre>Keller,A., Shaker,R., Furlong,J., Young,J., Zhao,S., Adams,M.D. and Hood,L.</pre>	lace, J.C., Smith, K., Swartzell, S.,	1 (bases 1 to 392)	etazoa; Chordata; Craniata; Vertebrata;		Homo sapiens (human)	AQ304789.1 G1:4024575		enomic clone	Approved Human Genomic Sperm I	192 ha NN linear GSC 16-DSC-1998	

Query Match Best Local Similarity

31.7%; Score 19; 100.0%; Pred. No.

DB 8;

Length 392;

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Minimum DB
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Abk68647 Human DNA
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Adg3591 Human Olf
Abq8862 Human GPC
Add79353 Human GP
Adb10947 Alloiococ
Adb1632 Alloiococ
Adb06373 Alloiococ
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RESULT 1
AAV23198
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Lactococcus lactis.
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/standard_name= "Constitutional promoter"
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New artificial promoter libraries - containing consensus promoter sequences and variable spacers, used to generate promoters for optimising expression of genes.

This is a Lactococcus lactis constitutional promoter sequence used in the construction of an artificial promoter library of the invention. The

Claim 28; Page 53; 89pp; English.

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Title:
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ALIGNMENTS

Query Match Best Local Matches 6	FEATURES SOUTCE ORIGIN	JOURNAL	VERSION KEYWORDS SOURCE: ORGANISM REFERENCE AUTHORS TITLE	ED006957 LOCUS DEFINITION ACCESSION
Query Match 100.0%; Score 60; DB 6; Length 60; Best Local Similarity 100.0%; Pred. No. 1e-21; Matches 60; Conservative 0; Mismatches 0; Indels 0; Gaps 0;	PN 17 2001503497-A/26 PD 13-MAR-2001 PF 25-AUG-1997 JP 1998510287 PF 25-AUG-1996 DK 0886/96 PR 23-AUG-1996 DK 0886/96 PI KALIN HAMMER, PETER RUDAR JANSSEN PC C12N15/09, C12N15/00 CC Strandedness: Double; CC Topology: Linear; FH Key Location/Qualifiers FT promoter (4). (60). FT promoter (4). (60). FT promoter (4). 000 I Location/Qualifiers 1. 60 //organism="Lactococcus lactis" //mol_type="genomic DNA" //db_xref="taxon:1358"	TER	BD006957.1 GI:18635328 JP 2001503249-A/26. Lactococcus lactis Lactococcus lactis Bacteria; Firmicutes; Lactobacillales; Streptococcaceae; Lactococcus. 1 (bases 1 to 60) Hammer, K. and Janssen, P.R. Artificial promoter labraries for selected organisms and promoters derived from such libraries.	

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CL718765 OR BBa004 AQ509292 nbxb0094A	CF426773 Lr_LC1ED_ CN627191 tae89e09.	CN557437 tae49h10. AJ562616 Cryptospo	CF808235 psHB033xE CK541566 rswhb0_00		_			CN635151 111B01 54	CV161937 CS_gil 49	AQ225650 HS 2003 B	AQ220278 HS 3250 B	AQ173773 HS_3194_A	CN634449 taf06b03.	CN874933 010130AAR	CD465864 LeukoN1_8	CN994676 Mdfw2054m

TITLE JOURNAL COMMENT REFERENCE AUTHORS ACCESSION VERSION KEYWORDS RESULT 1 BU071968 LOCUS SOURCE ORGANISM FEATURES DEFINITION source Tel: 017-35-8557

Fax: 617-495-8557

Email: dmelton@biohp.harvard.edu

DNA sequencing by: Endocrine Pancreas Consortium Harvard University, Howard Hughes Medical Institute Dept of Molecular and Cellular Biology, 7 Divinity Ave, Unpublished (2000)
Other_BSTs: im52f01.xl
Contact: Douglas Melton, Klaus H. Kaestner, & Hiroshi Seq primer: -40RP from Gibco Washington University Genome Sequencing Center Washington University Genome Sequencing Center Washington University Genome Sequencing Center Washington University Genome Teams of the Market Contact: Dr. Hiroshi Tel: 617-495-1812 Lemishka,I., Scearce,M., Brestelli,J., Gradwohl,G., Clifton,S., Hiller,L., Marra,M., Pape,D., Marrin,J., Blistain,A. Schmitt,A., Theising,B., Ritter,E., Ronko,I., Bennett,J., Cardenas,M., Gibbons,M., McCann,R., Cole,R., Tsagareishvili,R., Williams,T., Jackson,Y. and Bowers,Y. 1 (bases 1 to 542)
Melton,D., Brown,J., Kenty,G., Permutt,A.,
Lemishka,I., Scearce,M., Brestelli,J., Grav BU071968.1 GI:22513157 BU071968 Endocrine Pancreas Consortium im52f01.y1 HR85 islet Bukaryota; Metazoa; Chordata; hinoue@im.wustl fomo sapiens (human) 02138 quality sequence stop: 481.
Location/Qualifiers /clone="IMAGE:6038904" /tissue_type="Purified pancreatic islet" /lab_host="DH10B" organism="Homo sapiens" /mol_type="mRNA" /db_xref="taxon:9606" /clone_lib="HR85 islet" /note="Organ: Pancreas; Vector: pBluescript SK(-); Site_l: NotI; Site_2: XhoI; cDNA made by oligo-dT priming. Eutheria; Primates; Homo sapiens 542 bp Craniata; Vertebrata; Euteleostomi; Catarrhini; Hominidae; Homo. cDNA clone IMAGE: 6038904 Gradwohl,G., Clifton,S.,
., Martin,J., Blistain,A., Lee, C., Kaestner, K., dwohl, G., Clifton, S., linear EST 27-AUG-2002 6038904 5', Cambridge, 9

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This is a Lactococcus lactis constitutional promoter sequence used construction of an artificial promoter library of the invention. The

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Claim 28; Page 53; 89pp; English.

New artificial promoter libraries - o

containing consensus promoter

expression of genes.

WPI; 1998-179062/16. Jensen PR, Hammer K;

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AUTHORS
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OS Lactococcus lact
PN JP 2001503249-A/
PD 13-MAR-2001
PF 25-AUG-1997 JP 1
PR 23-AUG-1996 DK
PI KALIN HAMMER PET
PC C12N15/09, C12N15
CC Strandedness: Do
CC Topology: Linear
PH Key
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Patent: JP 2001503249-A 2
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Hammer, K. and Janssen, P.R.
Artificial promoter libraries for selected organisms and promoters
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JP 2001503249-A/27.
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JP 2001503249-A/27

13-MAR-2001

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23-AUG-1996 DK 0886/96
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C12N15/09, C12N15/00
Strandedness: Double;
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/db_xref="taxon:1358"
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JOURNAL COMMENT REFERENCE AUTHORS TITLE ACCESSION VERSION KEYWORDS SOURCE ORGANISM LOCUS DEFINITION RESULT 1 CC848135 ORIGIN FEATURES Query Match Best Local : Matches source Stegomyia. 1 (bases 1 to 723) 1 (bases 1 to 723) 1 Loftus, B., Shetty, J., Knudson BAC end sequencing of Aedes a. Unpublished (2003) Other GSSs: NDL.112X23.SP6 Aedes aegypti (yellow fever mosquito) Aedes aegypti Eukaryota; Metazoa; Arthropoda; Hexan CC848135 723 bp NDL.112K23.T7 Notre Dame Liverpool NotreDame Liverpool-112K23, genomic CC848135 Seq primer: T7 Class: BAC ends SSĐ Library was provided by David Severson Seg primer: T7 Tel: 301-838-3543 Fax: 301-838-0208 Contact: Brendan Loftus Department of Eukaryotic Genomics CC848135.1 GI:33196744 Similarity 9712 Medical Center Drive, Rockville, Neoptera; Endopterygota; 31.7%; Score 19; llarity 100.0%; Pred. No. Conservative 0; Mismatc /clone="NotreDame Liverpool-112K23" /clone lib="Notre Dame Liverpool" /clone lib="Notre Dame Liverpool" /note="Vector: pBCBAC1; Site 1: Hind III; The library was prepared from whole body tissue of newly hatched L1 larvae by David Severson at the University of Notre Dame and Hongbin Zhang" (mol_type="genomic DN/ strain="Liverpool" /db_xref="taxon:7159" organism="Aedes aegypti" |mol_type="genomic DNA" ocation/Qualifiers Metazoa; Arthropoda; Hexapoda; Insecta; Pterygota; Endopterygota; Diptera; Nematocera; Culicoidea; Aedes; 0; Knudson, D. and Mismatches aegypti genomic DB 9; DNA linear GSS 24-JULA Aedes aegypti genomic clone c survey sequence. Severson, D. MD 20850, USA Length 723; Indels 0 GSS 24-JUL-2003 Gaps larvae 0

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promoter library; gene expression; ds.
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This is a Lactococcus lactis constitutional promoter sequence used in the construction of an artificial promoter library of the invention. The

Claim 28; Page 54; 89pp; English

New artificial promoter libraries - containing consensus promoter sequences and variable spacers, used to generate promoters for optimising expression of genes.

WPI; 1998-179062/16.

Jensen PR,

Hammer K;

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Query Match Best Local Matches 6	FEATURES SOURCE	COMMENT	REFERENCE AUTHORS TITLE JOURNAL	ACCESSION VERSION KEYWORDS SOURCE ORGANISM	RESULT 1 BD006959 LOCUS DEFINITION
th 100.0%; Score 60; DB 6; Length 60; Similarity 100.0%; Pred. No. 3.6e-21; 60; Conservative 0; Mismatches 0; Indels 0; Gaps 0;	PI KALIN HAWMER, PETER RUDAR JANSSEN PC C12N15/09, C12N15/09 CC Strandedness: Double; CC Topology: Linear; FH Key Location/Qualifiers FT promoter (4). (60) Location/Qualifiers 1. 60 /organism="Lactococcus lactis" /mol_type="genomic DNA" /db_xref="taxon:1358"	OS Lactococcus lactis PN J- 201507249-A/28 PD 13-MAR-2001 PF 25-AUG-1997 JP 1998510287 PR 23-AUG-1996 DK 0886/96	Lactoroccus. 1 (bases 1 to 60) 1 (bases 1 to 60) Hammer, K. and Janssen, P.R. Artificial promoter libraries for selected organisms and promoters derived from such libraries Patent: JP 2001503249-A 28 13-MAR-2001; PETER RUDAR JANSSEN	BD006959 BD006959.1 GI:18635330 JP 2001503249-A/28. Lactococcus lactis Lactococcus lactis Bacteria; Firmicutes; Lactobacillales; Streptococcaceae;	BD006959 60 bp DNA linear PAT 31-JAN-2002 Artificial promoter libraries for selected organisms and promoters derived from such libraries.

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Copyright (c) 1993 - 2005 Compugen Ltd.
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BX282567 BX282567
BI597545 603247074
B0958678 PM4-CT0080
CA276845 SCRLSD201
CB771598 AMGNNUC:N
BZ156236 CH230-300
B15727 345P13.TV C
CV293192 BST881569
BQ720075 HS 5542 A
BH368974 AG-ND-127
BH375740 AG-ND-127
BH375740 AG-ND-127
BH33458 CH230-731
BH33458 CH230-731
BH236894 DATO PER
CV293829 BST882206
BH927283 od162a05.
BX208894 DATO PER
CX217560 SCRUMDI3
BZ219446 CH230-33
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BX208894 DATO PER
CX217560 SCRUMDI3
BZ2186041 LJG77d06.
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BZ209454 CH230-437
CA065509 SCBFAD104
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	FEATURES source		AUTHORS TITLE JOURNAL COMMENT	VERSION KEYWORDS SOURCE ORGANISM REFERENCE	RESULT 1 BX282567 LOCUS DEFINITION ACCESSION
/OLGALLEME="HOMO SEPLENS" /MOL_TYPE="mRNM, /MOL_TYPE="mRNM, /MOL_TYPE="MRNM, /CLONE="IMAGP998E0511699; IMAGE:5276908" /CLISNUE_TYPE="hippocampus" /LISNUE_TYPE="hippocampus" /LISNUE_TYPE="hippocampus" /CLONE_LIb="NH10B" /CLONE_LIb="NH1MGC_95" /CLONE_LIb="NHTMAGC_95" /CLO	This clone is available royalty-free from RZPD; contact RZPD (clone@rzpd.de) for further information. Seq primer: M13r, Primer sequence: TTTCACACAGGAAACAGCTATGAC. Location/Qualifiers 1445 //rossismers.com/casi	RZPDLIB; I.M.A.G. E. CDNA Clone Collection; RZPDLIB; I.M.A.G. E. CDNA Clone Collection; RZPDLIB; I.M.A.G. E. CDNA Clone Collection; Http://www.rzpd.de/CloneCards/cgi- http://www.rzpd.de/CloneCards/cgi- bin/showLib.pl.cgi/response?libNo=972 Contact: Ina Rolfs RZPD Deutsches Resourcenzentrum fuer Genomforschung GmbH Heubnerweg 6, D-14059 Berlin, Germany Tel: +49 30 32639 101 Fax: +49 30 32639 111 www.rzpd.de	Ebert, I., Heil, O., Hennig, S., Neubert, P., Partsch, E., Peters, M., Radelof, U., Schneider, D. and Korn, B. Human UnigeneSet - RZPD3 Unpublished (2003) Contact: Ina Rolfs RZPD Deutsches Ressourcenzentrum fuer Genomforschung GmbH RM Neuenheimer Feld 580, D-69120 Heidelberg, Germany	BX282567.1 GI:28615268 EST. HOmo sapiens (human) HOmo sapiens Bukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalla; Eutheria; Primates; Catarrhini; Hominidae; Homo. 1 to 445)	BX282567 445 bp mRNA linear EST 04-MAR-2003 BX282567 NIH MGC 95 Homo sapiens cDNA clone IMAGp998E0511699 ; IWAGE:5276908, mRNA sequence.

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Result
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                                                     ACN39016
ADR25849
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Aah16145 Human CDN
Aai59090 Human pol
Adi999313 DNA encod
Adb49073 Novel hum
Acq85186 Human tum
Acq85186 Human tum
Acq85186 Breast ca
Adi11070 Drosophil
Aai60876 Human pol
Adi60376 Human cDN
Adr07912 Full leng
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Aav23192 Lactococc
Add59434 Human can
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AAI92091	ABQ58707	AAF09147	ABA01728	ABN24358	ABS30422	ABK29495	ABK29810	ABZ17722	AAT09214	ABX52438	AAC18356	ABS49685	AAK23972	AAI55981	ADS68868	ABS43403	AAV23204	ABD32921	ABN71527	AAD19779	AAK65079	ADR07823	ABL18716	ADJ95416
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RESULT 1 AAV23201

AAV23201 standard; DNA; 60

BP.

28-JUL-1998 AAV23201;

(first entry)

Lactococcus lactis constitutional promoter Cp34

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New artificial promoter libraries - sequences and variable spacers, used expression of genes.
                                                                     WPI; 1998-179062/16.
                                                                                    Jensen PR,
                                                                                                                                    25-AUG-1997;
                                                                                                                                                    26-FEB-1998.
                                                                                                                                                                    WO9807846-A1
                                                                                                                                                                                                   promoter
                                                                                                                                                                                                                            Synthetic.
Lactococcus lactis.
                                                                                                                                                                                                                                                  Lactococcus lactis; artificial promoter
                                                                                                    (JENS/) JENSEN P R.
                                                                                                                   23-AUG-1996;
                                                                                                                                                                                                                                                 s lactis; constitutional promoter; optimise; spacer; promoter library; gene expression; ds.
                                                                                    Hammer K;
                                                                                                                    96DK-00000886.
                                                                                                                                    97WO-DK000342.
                                                                                                                                                                                  standard_name= "Constitutional promoter"
                                                                                                                                                                                                           Location/Qualifiers
                                            es - containing consensus promoter used to generate promoters for op
                                            optimising
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This is a Lactococcus lactis constitutional promoter sequence used in construction of an artificial promoter library of the invention. The

the

Claim 28; Page 54; 89pp; English.

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Post-processing: Listing first 45
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Maximum DB
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REFERENCE AUTHORS TITLE SOURCE ORGANISM ACCESSION VERSION KEYWORDS RESULT 1
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DEFINITION ORIGIN COMMENT FEATURES Query Match Best Local S Matches 60 JOURNAL source Similarity PR BR SS derived from such libraries Patent: JP 2001503249-A 29 13-MAR-2001; PETER RUDAR JANSSEN 1 (bases 1 to 60)
Hammer,K. and Janssen,P.R.
Artificial promoter libraries for selected Lactococcus lactis JP 2001503249-A/29. BD006960.1 GI:18635331 derived from such libraries. Artificial promoter libraries Bacteria; Firmicutes; Lactobacillales; 100.0%; Score 60; DB 6; ilarity 100.0%; Pred. No. 1.1e-17; Conservative 0; Mismatches 0; KALIN HAMMER, PETER RUDAR JANSSEN C12N15/09, C12N15/00 Strandedness: Double; promoter Lactococcus lactis JP 2001503249-A/29 13-MAR-2001 25-AUG-1997 JP 1998510287 23-AUG-1996 DK 0886/ lopology: Linear; /organism="Lactococcus lactis" /mol_type="genomic DNA" /db_xref="taxon:1358" Cocation/Qualifiers Location/Qualifiers (4). .(60). s for selected DNA Streptococcaceae; Length 60 organisms and promoters organisms and linear PAT 31-JAN-2002 and promoters

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REFERENCE 1 (bases | to | 1012)
Aphysical map of the xenopus tropicalis genome COMMENT Contect: Richard X Wilson, R.
Aphysical map of the xenopus tropicalis genome COMMENT Contect: Richard X Wilson Co
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library; gene expression; ds
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This is a Lactococcus lactis constitutional promoter sequence used in the construction of an artificial promoter library of the invention. The

Claim 28; Page 55; 89pp; English.

New artificial promoter libraries - containing consensus promoter sequences and variable spacers, used to generate promoters for optimising expression of genes.

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Result
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AC119435 Mus
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REFERENCE AUTHORS TITLE RESULT 1 BD006961 LOCUS SOURCE ORGANISM VERSION KEYWORDS ORIGIN FEATURES COMMENT ACCESSION DEFINITION Query Match Best Local Similarity Matches JOURNAL source PETER RUDAR JANSSEN OS Lactococcus lact PN JP 2001503249-A/ PD 13-MAR-2001 PF 25-AUG-1997 JP 1: PR 23-AUG-1996 DN PR 23-AUG-1996 DN PR KALIN HAMMER, PET PC C12N15/09, C12N15, CC Strandedness: Dot CC Topology: Linear FH Key PT promoter 59; 1 (bases 1 to 59) Hammer, K. and Janssen, P.R. Artificial promoter libraries for selected derived from such libraries Patent: JP 2001503249-A 30 13-MAR-2001; Lactococcus lactis BD006961.1 GI:18635332 JP 2001503249-A/30. Artificial promoter libraries derived from such libraries. BD006961 Bacteria; Firmicutes; Lactobacillales; Streptococcaceae; 100.0%; Score 59; DB 6; 1 larity 100.0%; Pred. No. 6.1e-22; Conservative 0; Mismatches 0; 25-AUG-1997 JF 1998510287 23-AUG-1996 DK 0886/96 KALIN HAMMER, PETER RUDAR JANSSEN C12N15/09, C12N15/00 Strandedness: Double; Lactococcus lactis JP 2001503249-A/30 13-MAR-2001 Topology: Linear; /organism="Lactococcus lactis" /mol_type="genomic DNA" /db_xref="taxon:1358" Location/Qualifiers (4). .(59). Location/Qualifiers ģ for selected organisms and Length 59; Indels organisms and promoters PAT 31-JAN-2002 s and promoters 0 Gaps 0

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RESULT 1 CD332288/c

POCUS

JOURNAL COMMENT ACCESSION VERSION KEYWORDS REFERENCE AUTHORS SOURCE ORGANISM DEFINITION TITLE Email: poustkammolgen.mpg.de
The library was characterised by oligonucleotide fingerprinting
(ONF) to reduce sequencing redundancy. According to the ONF
procedure, clones that display the same hybridisation matrix with a
battery of 200 8mer oligonucleotides are grouped into clusters. One
clone per ONF cluster is selected for sequencing. The size of each
cluster is an indicator of the frequency of a transcript in the
analysed library. The cluster size as well as the coordinates of
the other clones assigned to the same ONF cluster as the clone from
which the above EST is generated is available at the sea urchin
project web site at: http://www.molgen.mpg.de/ag_seaurchin/.cDNA
clones and filters are distributed via the Resource Center/Primary
Database of the German Human Genome Project (http://www.rzpd.de)
PCR PRIMERS
FORWARD: 5' CCCCAGGCTTRACACTTTANGCTTCCGGCTCG 3' (M13RSP) 5'-seq
BACKWARD: 5' CCCCAGGCTTRACACTTTANGCTTCCGGGTG 3' (M13RSP) 3'-seq
Seq primer: 5'-CCGGTCCGAAATGCCGGGT-3' pSport3/86
High quality sequence stop: 612. Max-Planck-Institut fuer Molekulare Genetik Ihnestr.63-73, P-14195 Berlin, Germany Tel: +49 30 8413 1235 Fax: +49 30 8413 1128 1 (bases 1 to 612)
Poustka,A.J., Groth,D., Hennig,S., Thamm,S., Cameron,A., Beck,A.,
Reinhardt,R., Herwig,R., Panopoulou,G. and Lehrach,H.
Generation, annotation, evolutionary analysis, and database
integration of 20,000 unique sea urchin EST clusters
Genome Res. 13 (12), 2736-2746 (2003) Strongylocentrotus purpuratus Bukaryota; Metazoa; Echinodermata; Eleutherozoa; Echinozoa; Echinoidea; Buechinoidea; Echinacea; Echinoida; CD332288
612 bp mRNA linear EST 17-SEP-2003 StrPUS37.005111 Sea urchin embryo 20hr blastula stage cDNA library MPMGp537 Strongylocentrotus purpuratus cDNA clone CALTDS37N206;MPI_537_6N20 5', mRNA sequence.
CD332288
CD332288.1 GI:34798810 Contact: Poustka AJ laboraty 145, dept. Strongylocentrotus purpuratus Strongylocentrotidae; Strongylocentrotus. .Lehrach

FEATURES

source

organism="Strongylocentrotus purpuratus"

Location/Qualifiers

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Maximum DB seq length: 200000000
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                                                                                                                                                                  /*tag= a
/standard_name= "Constitutional promoter"
                                                                                                                                                                                                                             constitutional promoter; optimise; spacer;
library; gene expression; ds.
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This is a Lactococcus lactis constitutional promoter sequence used in the construction of an artificial promoter library of the invention. The

New artificial promoter libraries - sequences and variable spacers, use expression of genes.

used

containing consensus promoter to generate promoters for optimising

Jensen PR, Hammer K;

WPI; 1998-179062/16.

Claim 28;

Page 55; 89pp; English

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Result
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AUTHORS
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OS Lactococcus lact
PN JP 2001503249-A/
PD 13-MAR-2001
13-MAR-2001
PF 25-AUG-1997 JP 1
PR 23-AUG-1996 DK
PR 23-AUG-1996 CC 12N15/09,C12N15
CC C12N15/09,C12N15
CC Topology: Linear
FH Key
FT promoter
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Patent: JP 2001503249-A 31 13-MAR-2001;
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Hammer, K. and Janssen, P.R.
Artificial promoter libraries
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13-MAR-2001
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Strandedness: Double;
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23-AUG-1996 DK 0886/
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/db_xref="taxon:1358"
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JOURNAL COMMENT REFERENCE AUTHORS ACCESSION VERSION KEYWORDS SOURCE ORGANISM FEATURES DEFINITION TITLE source Department of Animal Sciences University of Illinois at Urbana Ch 1201 W. Gregory Dr., Urbana, IL 618, Tel: 217 265 5326 Fax: 217 244 5617 Email: schoole Eukaryota; Metazoa; Chordata; Cr Mammalia; Butheria; Cetartiodact 1 (bases 1 to 445) Rogatcheva, M.B., Meyers, S., He, W Beever, J.B. and Schook, L.B. Piggy-BACing the Human Genome: C Through Comparative Genomics Initiative) Plate: 344 Bmail: schook@uiuc.edu Clones are derived from the porcine BAC library RPCI-44 (http://www.bacpac.chori.org/porcine242.htm). For BAC library Availability, please contact Pieter de Jong (pdejong@chori.org). Clones may be purchased from BACPAC Resources (http://BACPACrders.chori.org). This work was undertaken as part of the International Swine Genome Sequencing Consortium by University of Illinois at Urbana Champaign, USA with funds provided by grant No. AG2002-34480-11828 from USDA-CRREES and AG2001-35205-09965 from USDA/NRI (Livestock Genome Sequencing CL361142 445 bp DNA linear GSS 19-AUG-2004 RPCI44 344J4.f RPCI-44 Sus scrofa genomic clone RPCI44_344J4, genomic survey sequence. CL361142 CL361142.1 GI:51413112 GSS. Seq primer: T7 Class: BAC ends Unpublished scrofa (pig) /organism="Sus scrofa" /mol type="genomic DNA" /strain="four pigs (breed: Meishan)" /db_xref="taxon:9823" clone="RPCI44_344J4" ocation/Qualifiers 4 Chordata; Craniata; Vertebrata; Cetartiodactyla; Suina; Suidae; He, W., a Champaign 61801, USA Constructing Larkin,D.M., 37.5% Yorks Landrace and ρ Porcine Physical Marron, B.M., Su8. Euteleostomi; 25% Map

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AAV04063
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AAC47953 AAC51562 AAC51464 ABL03210	ABZ13652 ADG87654 ADG87655 ADA68053 ADC87410	ABN99221 AAX20572	AAV41691 AAF13601 ADL61118	ACD13866 AAC18503 ABL87329 AAF09091 ACH78367	AAV23180 ABK98604 ACD13855 ACD13856 ABK98605 ACD13856
Aac47953 Arabidops Aac51562 Arabidops Aac51464 Arabidops Abl03210 Drosophil		Abn99221 Arabidops Aax20572 Polynucle	Aav41691 Nucleotid Aaf13601 Aspergill Ad161118 Human pro	Acd13866 L. lactis Aac18503 Human sec Ab187329 Human ova Aaf09091 Fusarium Acf078367 Human gen	Aav23180 Lactococc Abk98604 L. lactis Acd13855 L.lactis Abk98605 L. lactis Acd13856 L.lactis Acd13856 L.lactis

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RESULT 1
AAV23204
25-AUG-1997;
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Lactococcus lactis.
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                                                             WPI; 1998-179062/16.
                                                                          Jensen PR,
                                                                                        (JENS/) JENSEN P R.
                                                                                                     23-AUG-1996;
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                                                                                                                                                                             promoter
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                                                                          Hammer K;
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                                                                                                      96DK-00000886.
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                                                                                                                                                                             Location/Qualifiers
                                                                                                                                                             /*tag= a
/standard_name= "Constitutional promoter"
                                                                                                                                                                     /*tag=
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This is a Lactococcus lactis constitutional promoter sequence used in the construction of an artificial promoter library of the invention. The

Claim 28; Page 55; 89pp; English

New artificial promoter libraries - containing consensus promoter sequences and variable spacers, used to generate promoters for optimising expression of genes.

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           U81288 Pisum sativ
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AL021069 Human DNA
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AL603747 Zebrafish
BX548050 Zebrafish
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ALIGNMENTS

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REFERENCE
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                                                                                                                                                                                                                                                                                                                                                                                                                                                          TITLE
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OS Lactcoccus lact
PN JP 2001503249-A/
PD 13-MAR-2001
PF 25-AUG-1997 JP 1
PR 23-AUG-1996 DK
PR KALIN HAMMER, PET
PC C12N15/09,C12N15
CC Strandedness: Do
CC Topology: Linear
FH Key
FT promoter
1 CATTGCGAAGTTTATTCTTGACAGTACGTTTTTACCATGATATAATAGTATAGTATGATATGTTATGTT 60
                                                    l Similarity
60; Conserva
                                                                                                                                                                                                                                                                                                                                                                                                                     derived from such libraries
Patent: JP 2001503249-A 32 13-MAR-2001;
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Hammer, K. and Janssen, P.R.
Artificial promoter libraries for selected
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                                                  100.0%; Score 60; DB 6; I
larity 100.0%; Pred. No. 2.6e-23;
Conservative 0; Mismatches 0;
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C12N15/09, C12N15/00
Strandedness: Double;
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JP 2001503249-A/32
13-MAR-2001
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23-AUG-1996 DK 0886/96
                                                                                                                                                                                                                                                  Topology: Linear;
                                                                                                                                organism="Lactococcus lactis"
/mol_type="genomic DNA"
/db_xref="taxon:1358"
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REFERENCE AUTHORS TITLE JOURNAL COMMENT SOURCE ORGANISM ACCESSION VERSION KEYWORDS ORIGIN FEATURES Query Match DEFINITION source CDNA Library Preparation: Life Technologies, Inc.
CDNA Library Arrayed by: Greg Lennon, Ph.D.
DNA Sequencing by: Washington University Genome Sequencing Center
Clone distribution: NCI-CGAP clone distribution information can be
found through the I.M.A.G.E. Consortium/LLNL at:
image.llnl.gov/image/html/iresources.shtml AW591004 460 bp mRNA linear EST 22-MAR-2000 x007bb6.x1 NCI_CGAP_Ut3 Homo sapiens cDNA clone IMAGE:2703251 3 similar to SW:IDHA_MACPA_Q28480 ISOCITEATE DEHYDROZENASE [NAD] SUBUNIT ALPHA, MITOCHONDRIAL PRECURSOR ; . mRNA sequence Tissue Procurement: Chri Emmert-Buck, M.D., Ph.D. Contact: Robert Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.

1 (bases 1 to 460) Homo sapiens Homo sapiens AW591004.1 GI:7278150 EST. 3mail: Unpublished (1997) **Cumor Gene Index** NCI-CGAP http://www.ncbi.nlm.nih.gov/ncicgap. National Cancer Institute, Cancer Genome Anat AW591004 primer: -40UP from Gibco quality sequence stop: 89.
Location/Qualifiers cgapbs-r@mail.nih. /clone lib="NCI CGAP Ut3"
/note="Organ: uterus; Vector: pCMV-SPORT6; Site_1: Sall;
/site_2: NcI; Cloned unidirectionally. Primer: Oligo dT.
Average insert size 1.45 kb. Life Technologies catalog #:
11541-018" db xref="taxon:9606" organism="Homo sapiens"
mol_type="mRNA" lone="IMAGE:2703251" (human) 33.3%; Strausberg, Christopher Moskaluk, M.D., Score vop. 20; Ph.D. BB Genome Anatomy Project (CGAP), 2; Length 460 Ph.D., information can be Michael æ

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This is a Lactococcus lactis constitutional promoter sequence used in the construction of an artificial promoter library of the invention. The

Claim 28; Page 56; 89pp; English

New artificial promoter libraries - containing consensus promoter sequences and variable spacers, used to generate promoters for optimising expression of genes.

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GenCore version (c) 1993 - 2005

5.1.6 Compugen Ltd

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ALIGNMENTS

REFERENCE AUTHORS TITLE SOURCE ORGANISM ACCESSION VERSION KEYWORDS RESULT 1 BD006964 LOCUS DEFINITION ORIGIN COMMENT FEATURES Query Match 100.0%; 9 Best Local Similarity 100.0%; 1 Matches 60; Conservative 0; JOURNAL source PETER RUDAR JANSSEN OS Lactococcus lact PN JP 2001503249-A/ PD 13-MAR-2001 PF 25-AUG-1997 JP 1 PR 23-AUG-1996 DK PI KALIN HAMMER, PET PC C12N15/09,C12N15 CC Strandedness: Do CC Topology: Linear FH Key PT promoter 1 (bases 1 to 60) Hammer,K. and Janssen,P.R. Artificial promoter libraries for selected derived from such libraries Patent: JP 2001503249-A 33 13-MAR-2001; JP 2001503249-A/33 BD006964 60 bp DNA linear I Artificial promoter libraries for selected organisms Bacteria; Firmicutes; Lactobacillales; Streptococcaceae; Lactococcus lactis BD006964.1 GI:18635335 derived from such libraries. Lactococcus lactis JP 2001503249-A/33 13-MAR-2001 Strandedness: Double; KALIN HAMMER, PETER RUDAR JANSSEN C12N15/09, C12N15/00 Topology: Linear; 25-AUG-1997 JP 1998510287 23-AUG-1996 DK 0886/96 /organism="Lactococcus lactis" /mol_type="genomic DNA" /db_xref="taxon:1358" Location/Qualifiers Location/Qualifiers 4) . . (60) . Score 60; DB 6; Length 60; Pred. No. 4e-26; Mismatches . . Indels organisms and promoters PAT 31-JAN-2002 <u>,</u> and promoters Gaps 0

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CG10533	W35992	AZ528690	CL902633	AZ669235	. BH158246	CR304111	CN201575	BU144062	BB184575	CR330935	BH988921	CN625364	BH978524	BH165823	BX616883	CE120196	88661991	CE335717	BB658648	AL986013
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". TITLE JOURNAL COMMENT REFERENCE AUTHORS RESULT 1 CA387595 LOCUS ORIGIN SOURCE ORGANISM ACCESSION VERSION FEATURES DEFINITION KEYWORDS Query Match
Best Local Similarity
Matches 19; Conserv source Single pass sequencing. Bases called trimmed with the aid of the trim_alt cross_match v0.990329. Pax: 304 725 0351
Email: crexroad@ncccwa.ars.usda.gov
Cincle nass sequencing. Bases called with phred v0.020425.c and 1 (bases 1 to 612)
Rexroad, C.E. 3rd, Lee, Y., Keele, J.W., Karamycheva, S., Brown, G., Koop, B., Gahr, S.A., Palti, Y. and Quackenbush, J.
Sequence analysis of a rainbow trout cDNA library and creation Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Actinopterygii; Neopterygii; Teleostei; Euteleostei; Protacanthopterygii; Salmoniformes; Salmonidae; Oncorhynchus. Cytogenet. Genome Res. 102 (1-4), 347-354 (2003) Contact: Rexroad CE Oncorhynchus mykiss (rainbow trout)
Oncorhynchus mykiss 5', mRNA sequence. CA387595 CA387595 612 by Tel: 304 724 8340 x2129 Fax: 304 725 0351 CA387595.1 GI:24716016 USDA, ARS, National Center for Cool and Cold Water Aquaculture 11876 Leetown Road, Kearneysville, WV 25430, USA gene index primer: AGCGGATAACAATTTCACACAGGA /organism="Oncorhynchus mykiss"
/mol type="mRNA"
/db_xref="taxon:8022"
/clone="1xT163B12 D_A06"
/tissue_type="pooled"
/lab_host="DH10B" /clone lib="NCCCWA 1RT"
/notes="Vector: pCMV SPORT6; Site_1: NotI; Site_Library made from pooled tissue from brain, gilspleen, muscle, and kidney." ocation/Qualifiers 31.7%; Dr 100.0%; Pr Score 19; DB 6; Pred. No. 2.5; đđ mRNA linear EST 06-NOV-2002 mykiss cDNA clone 1RT163B12_D_A06 Length 612; Salı; liver, γ̈́ of a

Conservative

Mismatches

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GenCore version 5.1.6 (c) 1993 - 2005 Compugen Ltd.

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16954	16245	16245	16179	16103		15739	15739	15643	15430	15430	15294	14603	14446	14113	14113	14113	13905	13905	13905	13737	13718	13002	13002	13002
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ALIGNMENTS

AAV23206 standard; DNA; 59

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RESULT 1
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                                                 New artificial promoter libraries - containing consensus promoter sequences and variable spacers, used to generate promoters for optimising expression of genes.
                                                                                            WPI; 1998-179062/16.
                                                                                                                Jensen
                                                                                                                                                           23-AUG-1996;
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Lactococcus lactis.
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/standard_name= "Constitutional promoter"
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This is a Lactococcus lactis constitutional promoter sequence used in the construction of an artificial promoter library of the invention. The

Claim 28; Page 56; 89pp; English.

GenCore version 5.1.6 Copyright (c) 1993 - 2005 Compus

Compugen Ltd.

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Minimum
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Gapop 60.0 , Gapext 60.0
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AL713914 Mouse DNA
AC099781 Homo sapi
BD006945 Artificia
AC101097 Mus muscu
AC098685 Mus muscu
Continuation (3 of
AC127599 Rattus no
AC116241 Rattus no
AC006333 Homo sapi
AL044180 Mouse DNA
AC111339 Rattus no
AC111319 Rattus no
AC111131 Rattus no
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ALIGNMENTS

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REFERENCE
AUTHORS
TITLE
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VERSION
KEYWORDS
SOURCE
ORGANISM
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DEFINITION
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Best Local Similarity
                                                     Matches
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                                                                                                                                                                                  source
1 CATAGAACAGTITATTCTTGACATTGAATAAGAAGGCTGATATAATAGCCAGTACTGTT 59
                                                                                                                                                                                                                                                                                                                                                                                                Artificial promoter libraries for selected organisms and promoters derived from such libraries patent: JP 2001503449-A 34 13-MAR-2001; PSTER RUDAR JANSSEN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1 (bases 1 to 59)
Hammer, K. and Janssen, P.R.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Artificial promoter libraries
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Lactococcus lactis
Bacteria; Firmicutes; Lactobacillales; Streptococcaceae;
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23-AUG-1996 DK 0886/96
KALIN HAWMER, PETER RUDAR JANSSEN
C12N15/09,C12N15/00
Strandedness: Double;
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JP 2001503249-A/34
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                                                                                                                              /organism="Lactococcus lactis"
/mol_type="genomic DNA"
/db_xref="taxon:1358"
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Mismatches 0;
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Result
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Maximum DB seq length: 200000000
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1569.593 Million cell updates/sec
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TITLE JOURNAL COMMENT REFERENCE AUTHORS SOURCE ORGANISM ACCESSION VERSION LOCUS DEFINITION RESULT 1 N58914 FEATURES KEYWORDS source Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo. 1 (Dases 1 to 437) Hillier, L., Clark, N., Dubuque, T., Elliston, K., Hawkins, M., Holman, M., Hultman, M., Kucaba, T., Le, M., Lennon, G., Marra, M., Parsons, J., Rifkin, L., Rohlfing, T., Soares, M., Tan, F., Parsonskis, E., Waterston, R., Williamson, A., Wohldmann, P. and High quality sequence stop: 1. Location/Qualifiers Seq primer: mob.REGA+ET This clone is available royalty-free through LLNL; contact the IMAGE Consortium (info@image.llnl.gov) for further information. Tel: 314 286 1800 Pax: 314 286 1810 Email: est@watson.wustl.edu The WashU-Merck EST Project Unpublished (1995) Homo sapiens Homo sapiens (human) N58914.1 GI:1202804 N58914 437 bp mRNA linear EST 23-FEB yy61e12.s1 Soares_multiple_sclerosis_2NbHMSP Homo sapiens cDNA clone IMAGE:278062 3', mRNA sequence. Washington University School of Medicine Contact: Wilson RK /organism="Homo sapiens" /mol type="mRNA" /db xref="GDB:3896438" /db xref="taxon:9606" /clone="IMAGE:278062" /tissue_type="multiple sclerosis lesions" /dev_stage="Age 46" /lab_host="DH10B (ampicillin resistant)" /clone_lib="Soares multiple_sclerosis_2NbHMSP" /note="Vector: pT7T3D (Pharmacia) with a modified polylinker V_TYPE: phagemid; Site_1: Not I; Site_2: Eco RI; lst strand cDNA was primed with a Not I - oligo(dT) primer_[5'] . 437 mRNA 63108 EST 23-FEB-1996

Copyright

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Result
No.
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Gapop 60.0 , Gapext 60.0
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1785.485 Million cell updates/sec
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Acd13876 L. lactis
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Aaf13601 Aspergill
Aav23203 Lactococc
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26.7	26.7	26.7	•	•	26.7	26.7	26.7	26.7	26.7	26.7	26.7	26.7	26.7	26.7	26.7	26.7	26.7	26.7	9	σ	σ	σ	26.7	26.7
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ABK98632	ADP28007	AAC51464	AAV99906	AAD22119	AAC51562	AAC47953 .	ADA68053	ADG87655	ADG87654	ABZ13652	ABN99221	ABS37021	AAK11581	AAK37348	ABA30396	AAI43193	ABA63146	AAI18176	ABX54585	AAK65319	AAK65318 .	ACD13866	ABK98615	ACD13856
Abk98632 Vector pE	J				Aac51562 Arabidops	Aac47953 Arabidops	w		Adg87654 A. thalia		Abn99221 Arabidops	Abs37021 Human liv	Aaki1581 Human bra	Aak37348 Human bon	Aba30396 Probe #88	Aai43193 Probe #11	Human	6 Probe	Abx54585 Bovine ES	Aak65319 Human imm	Aak65318 Human imm	<u> </u>	Abk98615 L. lactis	Acd13856 L.lactis

ALIGNMENTS

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RESULT 1
AAV23207
ID AAV2
XX AAV2
XX AAV2
XX Lact
XX Lact
XX Lact
XX Lact
XX Eff Eco
XX Synt
XX Synt
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XX O56-F
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                                                                                                                                                                       New artificial promoter libraries - c sequences and variable spacers, used expression of genes.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Synthetic.
Lactococcus lactis.
                                                                                                      Claim 28; Page 57; 89pp; English
                                                                                                                                                                                                                                                                                                                  WPI; 1998-179062/16.
                                                                                                                                                                                                                                                                                                                                                                                    Jensen
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           23-AUG-1996;
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                                                                                                                                                                                                                                                                                                                                                                                    PR,
                                                                                                                                                                                                                                                                                                                                                                                    Hammer K;
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/standard_name= "Constitutional promoter"
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                                                                                                                                                                                                        containing consensus promoter to generate promoters for optimising
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This is a Lactococcus lactis constitutional promoter sequence used in the construction of an artificial promoter library of the invention. The

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Minimum
Maximum
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BD006966 Artificia
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AC126079 Rattus no
BD006943 Artificia
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AL935114 Zebrafish
AC016017 Mus Mus no
CR385054 Danio rer
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REFERENCE AUTHORS TITLE ACCESSION VERSION KEYWORDS RESULT 1 BD006966 LOCUS DEFINITION SOURCE ORGANISM ORIGIN FEATURES COMMENT Query Match Best Local S Matches 60 JOURNAL source 1 (bases 1 to 60) Hammer, K. and Janssen, P.R. Artificial promoter libraries for selected derived from such libraries Patent: JP 2001503249-A 35 13-MAR-2001; PETER RUDAR JANSSEN BD006966.1 GI:18635337 JP 2001503249-A/35. Bacteria; Firmicutes; Lactobacillales; Streptococcaceae; Lactococcus lactis derived from such libraries. Artificial promoter libraries BD006966 Similarity 100.0%; ilarity 100.0%; Conservative 0, Lactococcus lactis JP 2001503249-A/35 13-MAR-2001 promoter KALIN HAMMER, PETER RUDAR JANSSEN C12N15/09, C12N15/00 Strandedness: Double; Topology: Linear; 25-AUG-1997 JP 1998510287 23-AUG-1996 DK 0886/96 organism="Lactococcus lactis" /mol_type="genomic_DNA" /db_xref="taxon:1358" oter (4)..(60). Location/Qualifiers Location/Qualifiers Score 60; DB 6; 1 Pred. No. 1.4e-24; ; Mismatches 0; 60 s for selected organisms Length 60 organisms and promoters PAT 31-JAN-2002

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                                                                                                                                           Email: est@watson.wustl.edu
Library materials provided by: Schuyler S.
constructed by: K. Gasic Library sequenced
University Genome Sequencing Center
WashU EST name: aaj55b01.y1
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similar to SW:TLPH_ARATH P50699
), mRNA semierro
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/db_xref="taxon:3750"
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/lab_host="DH10B ampicillin resistant"
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                                                            WPI; 1998-179062/16.
                                                                          Jensen PR,
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                                                                                                                                 26-FEB-1998.
                                                                                                                                                                                                                  Lactococcus lactis; constitutional promoter; optimise; spacer; artificial promoter library; gene expression; ds.
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                                                                                                                                                          standard_name= "Constitutional promoter"
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New artificial promoter libraries - containing consensus promoter sequences and variable spacers, used to generate promoters for optimising expression of genes.

This is a Lactococcus lactis constitutional promoter sequence used in construction of an artificial promoter library of the invention. The

Claim 28; Page 57; 89pp; English.

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REFERENCE AUTHORS ACCESSION VERSION KEYWORDS SOURCE ORGANISM DEFINITION source Email: szhao@tigr.org
Clones are derived from the rat BAC library CHORI-230
(http://www.chori.org/bacpac/rat230.htm). For BAC library
availability, please contact Pieter de Jong (pdejong@mail.cho.org).
Clones may be purchased from BACPAC Resources
(http://www.chori.org/bacpac/or ering_information.htm). BAC end
page: http://www.tigr.org/tdb/bac_ends/rat/bac_end_intro.html
Plate: 379 row: A column: 20 Contact: Shaying Zhao
Department of Eukaryotic Genomics
The Institute for Genomic Research Riggs,F., de Jong,P. and Fraser,C.M.
Rat BAC End Sequences from Library CHORI-230 MboI segment
Unpublished (1999)
Other_GSSs: CH230-379A20.TJB Class: BAC ends. The Institute for Genomic Research 9712 Medical Center Dr., Rockville, Zhao,S., Shetty,J., Shatsman,S., Tsegaye,G., Shvartsbeyn,A., Gebregeorgis,E., Overton,L., Riggs,F., de Jong,P. and Fraser,C.M. BZ206712
686 bp DNA linear GSS 11-OCT-CH230-379A20.TVB CHORI-230 Segment 2 Rattus norvegicus genomic Clone CH230-379A20, genomic survey sequence. Tel: 301 838 0200 Fax: 301 838 0208 Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; BZ206712 BZ206712.1 GI:23864764 Rattus norvegicus (Norway rat) (bases 1 to 686). /organism="Rattus norvegicus" /ml_type="genomic DNA" /strain="BN/SsNHsd/MCW" /db_xref="taxon:10116" ocation/Qualifiers clone lib="CHORI-230 Segment 2"
note="Yector: pTARBAC1.3; Site_1: MboI; Site_2: MboI; sex="Female" clone="CH230-379A20" . . 686 type="Brain" e_lib="CHORI-230 MD 20850, USA Geer,K.,
Russell,D., Chen,D., GSS 11-OCT-2002

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RESULT 1 AAV73209 JID AAV73209 JID AAV73209 AAV AAV72 XX AAV72 XX Lact XX Lact XX Lact XX Key PT Pron Synthetic. Lactococcus lactis. Lactococcus lactis; constitutional promoter; optimise; spacer; artificial promoter library; gene expression; ds. AAV23209; AAV23209 standard; DNA; 59 Lactococcus lactis constitutional promoter Cp44 28-JUL-1998 (first entry) Location/Oualifiers ВÞ

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23-AUG-1996;	96DK-00000886.	

(JENS/) JENSEN P R.

WPI; 1998-179062/16. Jensen PR, Hammer K;

New artificial promoter libraries - containing consensus promoter sequences and variable spacers, used to generate promoters for optimising expression of genes.

Claim 28; Page 58; 89pp; English

This is a Lactococcus lactis constitutional promoter sequence used in the construction of an artificial promoter library of the invention. The

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BD006968 Artificia
ALI10072 H. Bapiens
AC023227 Homo sapi
AL050349 Human DNA
AY254289 Petalonyx
AL132874 Human DNA
AC026726 Homo sapi
AC1186019 Mus muscu
AC113862 Mus muscu
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BD0065971 Artificia
BC075654 Mus muscu
AX374515 Oryza sat
AX673890 Sequence
AX374516 Oryza sat
AX6734516 Oryza sat
AX374516 Oryza sat
AX374517 Oryza sat
AX139415 Human DNA
AL606809 Zebrafish
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100.0%; Score 59; DB 6; Length 59; Similarity 100.0%; Pred. No. 8.6e-24;	Query Match Best Local Similarity
1	ORIGIN
/mol_type="genomic DNA" /db xref="taxon:1358"	
/organism="Lactococcus lactis"	
159	source
Location/Qualifiers	FEATURES
FT promoter (4). (59).	
C Topology: Linear;	
CC Strandedness: Double;	
PC C12N15/09, C12N15/00	
PR 23-AUG-1996 DK 0886/96	
OS Lactococcus lactis	COMMENT
PETER RUDAR JANSSEN	
Patent: JP 2001503249-A 37 13-MAR-2001;	JOURNAL
Artificial promoter libraries for selected organisms and promoters	TITLE
	AUTHORS
(bases 1 to 59)	REFERENCE
Lactococcus.	
Bacteria; Firmicutes; Lactobacillales; Streptococcaceae;	
Lactococcus lactis	ORGANISM
Lactococcus lactis	SOURCE
JP 2001503249-A/37.	KEYWORDS
BD006968.1 GI:18635339	VERSION
	ACCESSION
Artificial promoter libraries for selected organisms and promoters	DEFINITION
BD006968 59 bp DNA linear PAT 31-JAN-2002	Locus
	BD006968
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0 0 0 0

1829 5139 5259 5307

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1 CATCGGGTAGTTTATTCTTGACAATTAAGTAGAGCCTGATATAATAGTTCAGTACTGTT

Matches

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Result
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CB837576 VVE009A07

CB837166 VVE008AF01

CB837161 VVE008AF01

CB837281 VVE008AF01

CB837281 VVE008AF09

CB835520 VVE048B09

CB835520 VVE048B09

CB836323 VVE067A08

CB837234 VVE007C02

CB837234 VVE007C02

CB837234 VVE007C02

CB837234 VVE007C02

CB837234 VVE007D09

CB83734 VVE007D09

CB835724 VVE007D09

CB835724 VVE007D09

CB836646 VVE0075H02

CB836646 VVE007D09

CB837989 VVE009B005

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REFERENCE AUTHORS KEYWORDS SOURCE ORGANISM FEATURES ACCESSION VERSION RESULT 1 AQ704541/c LOCUS COMMENT DEFINITION JOURNAL MEDLINE PUBMED TITLE source or from Resear h Genetics (info@resgen.com). BAC end Web Server: http://www.htsc.washington.edu Plate: 1063 row: B column: 15 Seq primer: SP6 library availability, please contact Pieter de Jong (pieter@dejong.med.buffalo.edu). Clones may be purchased from BACPAC Resources (http://bacpac.med.buffalo.edu/ordering_bac. Contact: Mahairas GG, Wallace JC, Hood L High Throughput Sequencing Center University of Washington 401 Queen Anne Avenue North, Seattle, WA 98109, 1 (bases 1 to 507) Mahairas,G.G., Wallace,J.C., Smith,K., Swartzell,S., Keller,A., Shaker,R., Furlong,J., Young,J., Zhao,S., Clones are derived from the human BAC Email: jwallace@u.washington.edu scanning the human genome Proc. Natl. Acad. Sci. U. Sequence-tagged connectors: Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalla; Eutheria; Primates; Catarrhini; Hominidae; Homo. AQ704541.1 GI:5413967 GSS. AQ704541 HS_5487_B1_A08_SP6E_RPCI-11 Human Male genomic_clone_Plate=1063_Col=15_Row=B, .0449764 quality sequence stop: 507. Location/Qualifiers (206) 616-3618 (206) 616-3887 sapiens sapiens (human) BAC ends /sex="male" /clone lib="RPCI-11 Human Male BAC Library" /note="Vector: pBACe3.6; Site_1: EcoRI; Site_2: EcoRI; /organism="Homo sapiens" /mol_type="genomic DNA" /db_xref="taxon:9606" /clone="plate=1063 Col=15 U.S.A. ⊳ sequence approach 96 (17), 9739-9744 (1999) Row=B, genomic survey sequence. Row=B" library RPCI-11. linear GSS 07-JUL-1999 BAC Library Homo sapiens to mapping Holzman, T., Adams, M.D. For BAC bac.htm) and

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Ada72341 Rice gene
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Lactococc	Lactococc	Lactococc	Lactococc	Lactococc	Lactococc	Lactococc	Lactococc	Lactococc	on (14 o	Acn44868 Mouse gen	Human gen		Human liv	Human bra	Human bon	Probe #39	Human bre	Probe #41	Human foe	Probe #40	Bovine BS	Human gen	Human gen	Probe #30	

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RESULT 1
ANAZ32100
ID ANAZ32210
ID ANAZ32210
AC ANAZ2
XX AXX Lact
XX Lact
XX Lact
XX Lact
XX Expr Hyrom
FT prom
FT prom
FT prom
FT 25-A
XX 25-F
XX 25-
                                                                                                                                                                          New artificial promoter libraries - containing consensus promoter sequences and variable spacers, used to generate promoters for optimising expression of genes.
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Lactococcus lactis.
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/standard_name= "Constitutional promoter"
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This is a Lactococcus lactis constitutional promoter sequence used in the construction of an artificial promoter library of the invention. The

Claim 28; Page 58; 89pp; English

Copyright

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Database
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1 CATGGGGGAGTTTAT
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ALIGNMENTS

REFERENCE AUTHORS TITLE ACCESSION VERSION KEYWORDS SOURCE ORGANISM RESULT 1 BD006969 LOCUS COMMENT DEFINITION ORIGIN FEATURES Query Match Best Local S Matches 59 JOURNAL source derived from such libraries Patent: JP 2001503249-A 38 13-MAR-2001; PETER RUDAR JANSSEN OS Lactococcus lactis PN JP 2001503249-A/38 Artificial promoter libraries for selected organisms derived from such libraries. FIR CCC PR PP PN S 1 (bases 1 to 59) Hammer, K. and Janssen, P.R. Artificial promoter librar Lactococcus lactis BD006969.1 GI:18635340 JP 2001503249-A/38. n 100.0%; Score 59; DB 6; J Similarity 100.0%; Pred. No. 1.2e-23; 59; Conservative 0; Mismatches 0; lactococcus. 3acteria; Firmicutes; Lactobacillales; Streptococcaceae promoter KALIN HAMMER, PETER RUDAR JANSSEN C12N15/09, C12N15/00 Strandedness: Double; 25-AUG-1997 JP 1998510287 23-AUG-1996 DK 0886/ opology: Linear; 3-MAR-2001 /organism="Lactococcus lactis" /mol_type="genomic DNA" /db_xref="taxon:1358" Location/Qualifiers (4)...(59). cocation/Qualifiers libraries for selected organisms and promoters Length 59; PAT 31-JAN-2002 s and promoters

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ALIGNMENTS

REFERENCE AUTHORS FEATURES COMMENT SOURCE ORGANISM ACCESSION VERSION KEYWORDS RESULT 1 AQ456217 LOCUS DEFINITION JOURNAL MEDLINE PUBMED TITLE source Class: BAC ends
High quality sequence stop: 323.
Location/Qualifiers or from Resear h Genetics (info@resgen.com). BAC end Web Server: http://www.htsc.washington.edu Plate: 652 row: F column: 19
Seq primer: SP6 Clones are derived from the human BAC library availability, please contact (pieter@dejong.med.buffalo.edu). Clon AQ456217

323 bp DNA linear GSS 21-APR-1999
HS_5076_B1_C10_SP6E_RPCI-11 Human Male_BAC_Library Homo sapiens
genomic_clone Plate=652 Col=19 Row=F, genomic_survey sequence. library availability, please contact Pieter de Jong (pleter@dejong.med.buffalo.edu). Clones may be purchased from BACPAC Resources (http://bacpac.med.buffalo.edu/ordering_bac.) Tel: (206) 616-3618
Fax: (206) 616-3887
Email: jwallace@u.washington.edu Contact: Mahairas GG, Wallace JC, Hood L High Throughput Sequencing Center University of Washington 401 Queen Anne Avenue North, Seattle, WA 98109, USA Sequence-tagged connectors: A sequence approach to mapping scanning the human genome Proc. Natl. Acad. Sci. U.S.A. 96 (17), 9739-9744 (1999) Keller, A., Shaker, R., Furlong, J., Young, J., Mahairas,G.G., Wallace,J.C., Smith,K., Swartzell,S., Holzman,T.,
Keller,A., Shaker,R., Furlong,J., Young,J., Zhao,S., Adams,M.D. Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo. Homo sapiens AQ456217.1 Mammalia; Eutheria; 1 (bases 1 to 323) Homo sapiens (human) 'sex="male"
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ADP18784
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                                            Aav23200 Lactococc
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Aav23196 Lactococc
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	ADG46742	ABS52506	ABA90521_02	ABD33597	ACN44550	ACN44478	ADQ97626	ACN89898	ADQ91605	ADM32122	ABQ81817	AAS00890	ACN80681	AAL17559	AAF13601	ADJ28203	ABX58476	AAL35488	AAL10483	ABX43872	AAC03364	AAT31875	AAQ46205	AAQ23880	AAV23205
	Adg46742 Human tra	Abs52506 Human tra	Continuation (3 of	Abd33597 Murine ca	Acn44550 Human gen	Acn44478 Human gen	Adq97626 Mouse can		Adq91605 Luciferas		Abq81817 Photuris	Aas00890 Beetle cD	Acn80681 Breast ca	Aal17559 Human bre	Aaf13601 Aspergill	Adj28203 Human mus	Abx58476 cDNA enco	Aal35488 Human mus						Aaq23880 pKTH1820	Aav23205 Lactococc

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RESULT 1
AAV23211
ID AAV2
XX
XXXXXX
                                            New artificial promoter libraries - containing consensus promoter sequences and variable spacers, used to generate promoters for op expression of genes.
                                                                                 WPI; 1998-179062/16.
                                                                                                                                                                                                                                                 Key
                                                                                                    Jensen PR, Hammer K;
                                                                                                                                         23-AUG-1996;
                                                                                                                                                           25-AUG-1997;
                                                                                                                                                                               26-FEB-1998.
                                                                                                                                                                                                 WO9807846-A1
                                                                                                                                                                                                                                         promoter
                                                                                                                                                                                                                                                                               Synthetic
                                                                                                                                                                                                                                                                                              Lactococcus lactis; constitutional promoter; optimise; spacer; artificial promoter library; gene expression; ds.
                                                                                                                                                                                                                                                                                                                                                28-JUL-1998
                                                                                                                                                                                                                                                                                                                                                                   AAV23211;
                                                                                                                                                                                                                                                                                                                                                                                     AAV23211 standard; DNA; 60 BP.
                                                                                                                                                                                                                                                                                                                          Lactococcus lactis constitutional promoter Cp6
                                                                                                                       (JENS/) JENSEN P R.
                                                                                                                                                                                                                                                                   Lactococcus lactis.
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                                                                                                                                         96DK-00000886.
                                                                                                                                                            97WO-DK000342.
                                                                                                                                                                                                                                                Location/Qualifiers
                                                                                                                                                                                                                    standard_name= "Constitutional promoter"
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This is a Lactococcus lactis constitutional promoter sequence used in the construction of an artificial promoter library of the invention. The

Claim 28;

Page

59; 89pp;

English

optimising

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Minimum DB
Maximum DB
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seq length: 2000000000
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SOURCE
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  60;
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Artificial promoter libraries for selected derived from such libraries
Patent: JP 2001503249-A 39 13-MAR-2001;
                                                                                                                                                                                                                                                                                         PETER RUDAR JANSSEN
                                                                                                                                                                                                                                                                                                                                                                                                    Lactococcus lactis
                                                                                                                                                                                                                                                                                                                                                                                                                            BD006970.1 GI:1863
JP 2001503249-A/39.
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              Similarity
                                                                                                                                                                                                                                              Lactococcus lactis
JP 2001503249-A/39
13-MAR-2001
100.0%; Score 60; DB 6; liarity 100.0%; Pred. No. 3.6e-24; Conservative 0; Mismatches 0;
                                                                                                                                    promoter
                                                                                                                                                                         KALIN HAMMER, PETER RUDAR JANSSEN
C12N15/09, C12N15/00
Strandedness: Double;
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23-AUG-1996 DK 0886/96
                                                                                                                                                            Copology: Linear;
                                                                                                                                                                                                                                                                                                                                                                                                                                            .1 GI:18635341
                                                                /organism="Lactococcus lactis"
/mol_type="genomic DNA"
/db_xref="taxon:1358"
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ocation/Qualifiers
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s for selected organisms and promoters
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BM059694 KS01003F0		CF031591 QCD7a02.y	٠.	CF030870 QCD27e12.	CF031602 QCD7b01.y	BM344151 rr47d05.y	CF030599 QCD24b08.	AI634177 wa88g08.x	CF030752 QCD26a08.	CD988414 QAP3h05.y	CF030874 QCD27f05.	AI855241 603010G10	CF030597 QCD24b04.	CF058870 QCR3b02.y	AQ661689 HS 5208 }	BG192478 RST11593	CF030598 QCD24b05.	CF030356 QCD21a04.	CF029631 QCD12g07.	CF030997 QCD29c02.	

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493 GATGATATAATAACTGAGTA 474
                        36 GATGATATAATAACTGAGTA 55
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The Institute for Genomic Research
Department of Bukaryotic Genomics, TIGR, 9712 Medical Center Drive,
Rockville, MD 20850, USA
Tel: 301-838-0200
Fax: 301-838-0208
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Carnivora; Fissipedia; Canidae; Canis.

(bases 1 to 579)

Kirkness, E.F., Bafna, V., Halpern, A.L., Levy, S., Remington, K., Rusch, D.B., Delcher, A.L., Pop, M., Wang, W., Fraser, C.M. and Venter, J.C.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     The dog genome: survey sequencing and comparative analysis Science 301 (5641), 1898-1903 (2003)
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/db_xref="taxon:9615"
/clone_lib="Dog Library"
/note="Site_l: BatXI; Libraries were prepared
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         hav23197 Lactococc
hbk98622 Lambda CP
Acd13873 L. lactis
Abk98612 Lambda CP
Acd13863 L. lactis
Abk98601 Vector ps
Acd13863 L. lactis
Abk98601 Vector ps
Acd13852 Xyl opera
Abk98591 pEP25 Vec
Acd13842 Plasmid p
Abk98592 Vector ps
Acd13843 Plasmid p
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Asf25833 R. marinu
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Colon	6 ABL62481	18061 6	6.7	16	42	
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Acd13885 L. lactis	9 ACD13885.		٠	16	39	
Abk98634 Vector pE	5 ABK98634		٥.	16	3.8	
Aac50686 Arabidops			٠,	16	: 37	
Abz14845 Arabidops	6 ABZ14845		٠,	16	36	
Adg70458 Alginic a	12 ADG70458		٥.	16	35	
Acd13868 L. lactis	9 ACD13868			16	34	
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Abk98627 L. lactis			٥.	16	3 2	
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Aav23199 Lactococc			٥.	16	29	
Aav23178 Lactococc	2 AAV23178	60 2	6	16	28	
Aav23214 Lactococc			٠	16	27	
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Aav23213 Lactococc	2 AAV23213		٥.	16	25	
Aav23194 Lactococc	2 AAV23194		٥,	16	24	
Aav23206 Lactococc	2 AAV23206		٥.	16	23	
Aav23210 Lactococc	2 AAV23210		٥.	16	22	
Aav23186 Lactococc	2 AAV23186		٥.	16	21	

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RESULT 1
AAV23212
ID AAV2
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DE Lact
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KW Lact
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Synthetic.
Lactococcus lactis.
                                                                                                            23-AUG-1996;
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                                                                                                                                                       WO9807846-A1
                                                                                                                                                                                     promoter
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                                                                                                                                                                                                                                                                                    AAV23212;
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                                                                                                                                                                                            Key
                                                                                                                                                                                                                                Lactococcus lactis; artificial promoter
                                                                                                                                                                                                                                                                     28-JUL-1998
                                                                                             (JENS/) JENSEN P R.
                                                                                                                                                                                                                                                                    (first entry)
                                                                                                            96DK-00000886
                                                                                                                          97WO-DK000342
                                                                                                                                                                                            Location/Qualifiers
                                                                                                                                                                   /standard_name= "Constitutional promoter"
                                                                                                                                                                                                                                constitutional promoter; optimise; spacer;
library; gene expression; ds.
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Human

New artificial promoter libraries sequences and variable spacers, used expression of genes

used

containing consensus promoter to generate promoters for optimising

WPI; 1998-179062/16.

Jensen PR,

Hammer K;

Claim 28; Page 59; 89pp; English.

This is a Lactococcus lactis constitutional promoter sequence used in construction of an artificial promoter library of the invention. The

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Result
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ACCESSION

BH770983 1934 bp DNA linear GSS 01-MAY-2002 LLMGt.ag708 MG1363 Random Sequence Tag Library Lactococcus lactis subsp. cremoris genomic, genomic survey sequence. BH770983

Query Match Best Local Matches 2 Qy 6 Db 368	FEATURES BOUTCE ORIGIN	REFERENCE AUTHORS TITLE JOURNAL	RESULT 1 BX137003 LOCUS LOCUS ACCESSION VERSION VERSION KEYWORDS SOURCE ORGANISM	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
ch 33.3%; Score 20; DB 9; 1 Similarity 100.0%; Pred. No. 0.98; 20; Conservative 0; Mismatches 0 6 TTTAGTTTATTCTTGACAAA 25	http://www.sanger.ac.uk/Projects/D_rerio/ Location/Qualifiers 1854 /organism="Danio rerio" /mol_type="genomic DNA" /db_xref="taxon:7955" /clone="DXEY-90A17" /tissue_type="Testis" /note="vector pIndigoBAC-536"	karyota; Metazoa; Chordata; Craniata tinopterygii; Neopterygii; Teleostei priniformes; Cyprinidae; Danio. (Dases 1 to 854) mphray, S.J., Huckle, B. and Durham, J rect Submission rect Submission The Sanger Ins bmitted (27-JAN-2003) The Sanger Ins bmitted (27-JAN-2003) The Sanger Ins mpus, Hinxton, Cambridgeshire, CB10 mquery@sanger.ac.uk Unpublished is sequence was generated from the S rt of the Daniokey BAC Library creat ygene, Further details;	BX137003 BX137003 BX137003 BX137003.1 GI:27968314 GSS. GSS. Danio rerio (zebrafish) Danio rerio	17 28.3 454 8 AZ122453 17 28.3 466 7 CC533440 17 28.3 466 7 CC5334677 17 28.3 524 7 CC338677 17 28.3 551 2 BF111841 17 28.3 551 6 CD307372 17 28.3 551 6 AQ21867 17 28.3 576 7 CN183605 17 28.3 576 7 CN183605 17 28.3 628 7 CF790646 17 28.3 634 1 AV241888 17 28.3 650 7 CF362159 17 28.3 650 7 CF362159 17 28.3 668 7 CF362159 17 28.3 668 7 CF362159 17 28.3 668 7 CR52364 17 28.3 685 9 CE8127633 17 28.3 685 9 CE8127633 17 28.3 685 9 CE8127633
Length 854;); Indels 0; Gaps 0;	5/.	<pre>L; Vertebrata; Euteleostomi; .; Ostariophysi; L. Senome Trust Genome titute, Wellcome Trust Genome 1SA, UK. E-mail enquiries: 1SA, UK. B-mail enquiries</pre>	. linear GSS 28-JAN-2003 genomic survey sequence.	AZ122453 RPCI-23-4 CC536440 tah73al1. AQ724742 HS 5402 A CC338677 ENI7401-5 BF111841 7136C07.x CD307372 StrPu691. AQ419867 RPCI-11-1 CN183605 UCRCS040 BJ110901 BJ110901 AZ558305 RPCI-23-2 CF790644 875803 MA AV243888 AV243888 CE800258 tigr-9ss- CF363454 831311 MA CF362159 828548 MA CF362159 828548 MA CN632467 taf02a04. AG565424 Mus muscu CE805815 tigr-9ss- CN625364 tae01a11. CR127633 tigr-9ss- BU895332 X022F06 P

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REFERENCE AUTHORS ACCESSION VERSION KEYWORDS RESULT 1 BD006973 LOCUS FEATURES source SOURCE ORGANISM ORIGIN COMMENT DEFINITION Query Match Best Local Similarity Matches 60; Conserva TITLE JOURNAL PETER RUDAR JANSSEN OS Lactococcus lactis PN JP 2001503249-A/42 PD 13-MAR-2001 PF 25-AUG-1997 JP 19985 PR 23-AUG-1996 DK PI KALIN HAMMER, PETER R PC C12N15/09, C12N15/00 CC Strandedness: Double CC Topology: Linear, FH Key FT promoter (4) derived from such libraries Patent: JP 2001503249-A 42 13-MAR-2001; Hammer, K. and Janssen, P.R. Hammer, K. and Janssen, P.R. Artificial promoter libraries for selected BD006973.1 GI:18635344 JP 2001503249-A/42. Artificial promoter libraries BD006973 derived from such libraries. Bacteria; Firmicutes; Lactobacillales; Streptococcaceae; Lactococcus lactis 100.0%; ! |larity 100.0%; | |Conservative 0; KALIN HAMMER, PETER RUDAR JANSSEN C12N15/09, C12N15/00 Strandedness: Double; 25-AUG-1997 JP 1998510287 23-AUG-1996 DK 0886/96 /organism="Lactococcus lactis" /mol_type="genomic DNA" /db_xref="taxon:1358" oter (4)..(60) Location/Qualifiers ocation/Qualifiers Score 60; DB 6; I Pred. No. 1.2e-23; ; Mismatches 0; 60 bp DNA linear 1 s for selected organisms Length 60 organisms and promoters PAT 31-JAN-2002 and promoters

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RESULT 1 AAV23213 Synthetic.
Lactococcus lactis. Lactococcus lactis; constitutional promoter; optimise; spacer; artificial promoter library; gene expression; ds. Lactococcus lactis constitutional promoter Cp8 28-JUL-1998 AAV23213; AAV23213 standard; DNA; 60 promoter (first entry) Location/Qualifiers /*tag= ВP

ALIGNMENTS

WO9807846-A1 /standard_name= "Constitutional promoter"

(JENS/) JENSEN P R. 23-AUG-1996; 25-AUG-1997; 96DK-00000886 97WO-DK000342

26-FEB-1998

Jensen PR, Hammer K;

WPI; 1998-179062/16.

New artificial promoter libraries - containing consensus promoter sequences and variable spacers, used to generate promoters for optimising expression of genes.

Claim 28; Page 60; 89pp; English.

This is a Lactococcus lactis constitutional promoter sequence used in construction of an artificial promoter library of the invention. The in the

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		12 13 14		. 10 U	0 0	Result No. Score	Pred. 1 score c and is			Database :	Post-processing:	Minimum DB s Maximum DB s	Total number	Word size :	Searched:	Scoring table:	Title: Perfect score: Sequence:	Run on:	OM nucleic -	
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	Thermostabilization and thermoactivation of thermolabile enzymes trebalose and its application for the synthesis of full length cDNA, Proc. Natl. Acad. Sci. U.S.A. 95 (2), 520-524 (1998) Itoh,M., Kitsunai,T., Akiyama,J., Shibata,K., Izawa,M., Kawai,J. Tomaru,Y., Carninci,F., Shibata,Y., Ozawa,Y., Muramatsu,M., Okazaki,Y. and Hayashizaki,Y. Automated filtration-based high-throughput plasmid preparation system. Genome Res. 9 (5), 463-470 (1999) Carninci,P. and Hayashizaki,Y.	c.riken.jp, URL:http: ma,Y., Westover,A., J Muramatsu M and F	Sciences Center(GSC), Yokohama Institute The Institute of Physical and Chemical Research (RIKEN) 1-7-22 Suehiro-cho, Tsurumi-ku, Yokohama, Kanagawa 230-0045, Jaj Tel: 81-45-503-9222	ayashizaki e Exploration Researc	Watanabe,S., Yamamura,T., Yamanaka,I., Y. Yokota,T., Yoshida,K., Yoshiki,A., Yoshi Hayashizaki,Y. RIKEN Mouse ESTs (Konno,H., et al.)	Kusakabe, M., Matsuyama, T., Miki, R., Mizuno, Y., Nakamura, M., Oc Okazaki, Y., Ono, T., Owa, C., Saito, H., Sakai, C., Sato, K., Shibata, Y., Shigemoto, Y., Shinagawa, A., Shiraki, T. Sogabe, Y., Sugahara, Y., Suzuki, H., Tagawa, A., Takahashi, F., Tominaga, N., Toya, T., Tsunoda, Y., Watahiki A., Takahashi, F., Tominaga, N., Toya, T., Tsunoda, Y., Watahiki A., Takahashi, F., Tominaga, N., Toya, T., Tsunoda, Y., Watahiki A., Wat	, Fukuda, S., Fukunis , Ishii, Y., Ishikawa , Kagawa, I., Kai, C., Y., Kondo, S., Koya, S	Chordata; Craniata; Vertebrata; Rodentia; Sciurognathi; Muridae; Akahira.S. Akivama.J. Arakawa	mouse)	256 pp mkNA ngth enriched, 12 clone 6720465A16		ALL GAMENTS		BP747545	CC170012	CE683173 AV256717 BH929272	EM540077 CC201140 CL551243	BM215328 BI567276 BI615973	BQ559914 BI616968	BU014513 CL775176 BY424520 AW835252
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sunai,T., Akiyama,J., Shibata,K., Izawa,M., Kawai,J.,
rninci,P., Shibata,Y., Ozawa,Y., Muramatsu,M.,
d Hayashizaki,Y. r Genome Exploration Research Group, RIKEN Genomic er(GSC), Yokohama Institute of Physical and Chemical Research (RIKEN) o-cho, Tsurumi-ku, Yokohama, Kanagawa 230-0045, Japan 3-9222 I:8460820 256 bp mRNA linear EST 25-JUN-2000 N full-length enriched, 12 days embryo male wolffian ulus cDNA clone 6720465A16 3', mRNA sequence Ts (Konno, H., et al.) azoa; Chordata; Craniata; Vertebrata; Euteleostomi; reria; Rodentia; Sciurognathi; Muridae; Murinae; Mus. hide Hayashizaki (house mouse)

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This is a Lactococcus lactis constitutional promoter sequence used in construction of an artificial promoter library of the invention. The

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Claim 28; Page 60; 89pp; English.

New artificial promoter libraries - c sequences and variable spacers, used expression of genes.

containing consensus promoter to generate promoters for optimising

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REFERENCE AUTHORS TITLE JOURNAL COMMENT ACCESSION VERSION KEYWORDS FEATURES source SOURCE ORGANISM RESULT 1 AW003938/c LOCUS DEFINITION cDNA Library Arrayed by: Greg Lennon, Ph.D.

DNA Sequencing by: Washington University Genome Sequencing Center
Clone distribution: NCI-CGAP clone distribution information can be
found through the I.M.A.G.E. Consortium/LLNL at:
www-bio.llnl.gov/bbrp/image/image.html
Seq primer: -40UP from Gibco. Contact: Robert Strausberg, Ph.D.
Email: cgapbs-r@mail:nih.gov
Tissue Procurement: Christopher A. Moskaluk, M.D., Ph.D., Mic
R. Emmert-Buck, M.D., Ph.D.
CDNA Library Preparation: M. Bento Soares, Ph.D., M. Fatima Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.

1 (Dases 1 to 450)

NCI-CGAP http://www.ncbi.nlm.nih.gov/ncicgap.
National Cancer Institute, Cancer Genome Anatomy Project (CGAP), AW003938 450 bp mRNA linear EST 08-SEP-1999 wg84f04.x1 NCI CGAP GC6 Homo sapiens cDNA clone IWAGE:2478751 3', mRNA sequence.

AW003938 AW003938.1 GI:5850854 EST Homo sapiens Unpublished (1997) Homo sapiens (human) umor Gene Index /lab nost="https://lab.pdf" //lab.pdf" //lab Ph.D. /organism="Homo sapiens" /mol_type="mRNA" /db_xref="taxon:9606" /clone="IMAGE:2478751" tissue type="pooled germ cell tumors"
lab_host="DH10B" ocation/Qualifiers Ph.D., Michael

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AAZ01425_08

This is a Saccharomyces cerevisiae promoter sequence used in the construction of an artificial promoter library of the invention.

The

New artificial promoter libraries - sequences and variable spacers, used expression of genes.

used

containing consensus promoter to generate promoters for optimising

WPI; 1998-179062/16.

Jensen

PR,

Hammer K;

Claim 28; Page 61; 89pp; English.

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Ab170336	Abk31389	Ab133568	Ads99793	Abq66973	Ab170547	Ab134532	Ab133086	Aas63324	Ab13286	Abn80118	Ab170234	Abk31273	Ab13313:	Ab132815	Abl10170	Abq70842	. Ada68824	Abz15437	Aad27607	Ads479	Abq44459 (Abq44458	Adl11516	Adh42842
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Copyright

GenCore version 5.1.6 (c) 1993 - 2005 Compugen Ltd

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ALIGNMENTS

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New artificial promoter libraries - containing consensus promoter sequences and variable spacers, used to generate promoters for optimising expression of genes.
                                                                                                                                     25-AUG-1997;
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Saccharomyces
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                                                                      WPI; 1998-179062/16.
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                                                                                                     (JENS/) JENSEN P R.
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This is a Saccharomyces cerevisiae promoter sequence used in the construction of an artificial promoter library of the invention. The

Claim 28; Page 61; 89pp; English.

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REFERENCE AUTHORS TITLE SOURCE ORGANISM ACCESSION VERSION KEYWORDS LOCUS DEFINITION RESULT 1 BD006975 COMMENT ORIGIN FEATURES Query Match Best Local Similarity JOURNAL source Artificial promoter libraries for selected derived from such libraries patent IP 2001503249-A 44 13-MAR-2001; PETER RUDAR JANSSEN OS Saccharomyces cerevisiae (yeast) PN JP 2001503249-A/44 Saccharomyces cerevisiae Eukaryota; Pungi; Ascomycota; Saccharomycotina; Saccharomycetes; Saccharomycetales; Saccharomycetaceae; Saccharomyces. PH CCC PR PR PR OS BD006975 Artificial promoter libraries Saccharomyces cerevisiae (baker's yeast) JP 2001503249-A/44. BD006975.1 GI:18635346 derived from such libraries. l (bases 1 to 182) Hammer,K. and Janssen,P.R. 100.0%; ilarity 100.0%; Conservative 0 KALIN HAMMER, PETER RUDAR JANSSEN C12N15/09, C12N15/00 Strandedness: Double; promoter 25-AUG-1997 JP 1998510287 23-AUG-1996 DK 0886/ Topology: Linear; L3-MAR-2001 /organism="Saccharomyces cerevisiae" /mol_type="genomic DNA" /db_xref="taxon:4932" Location/Qualifiers Score 182; D Pred. No. 1.5 0; Mismatches ocation/Qualifiers 0886/96 . (181) bp DNA linear I s for selected organisms DB 6; 1.5e-90; es 0; Length 182; organisms and promoters PAT 31-JAN-2002 and promoters

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EST 05-AUG-2004 anum cDNA 5' (Mus musculus),

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ORIGIN	source	FEATURES					JOURNAL		TITLE	AUTHORS		ORGANISM
/celutype="Includes Neural tube, notochord, somites" /cell type="Includes Neural tube, notochord, somites" /dev_Stage="Stage 18-22" /clone lib="St18-22 Neural tube (NT)" /note="Vector: pCCWSport6; Site_1: Not1; Site_2: Sall; /normalized cDNA plasmid library prepared by Invitrogen. Size fractionated mRNA was polydT primed and cloned into Not1-Sall site of pCWVSport6. Bacterial host is EMDH10B-TONA. Average insert size is 1.5 kB. TAG_LIB=NT"	1. 650 /organism="Ambystoma mexicanum" /mol_type="mRNA" /mol_type="mRNA" /db_xref="taxon:8296" /times="taxon:8296"	Location/Qualifiers	Email: tanaka@mpi-cbg.de Plate: NT018B row: 11 Column: B Ser primer: GCP TAT TAG GCC TAT TTB GCT GAC A	Tel: 0049 351 210 2620 Fax: 0049 351 210 1489	Dresden Pfotenhauerstrasse 108,01307 Dresden, Germany	Tanaka Labar Institute of Molecular Cell Biology and Constitute Max Planck Institute of Molecular Cell Biology and Constitute	Genome Biol. (2004) In press	expressed sequence tags from embryonic and regenerating blastema cDNA libraries	An Ambystoma mexicanum EST sequencing project: Analysis of 17,352	1 (Dases I to 650) Habermann, B., Bebin, A.G., Herklotz, S., Volkmer, M., Eckelt, K., Doblic V Propoleta u Cobactut v with C and moute a v	Amphibia; Batrachia; Caudata; Salamandroidea; Ambystomatidae; Ambystoma.	Ambystoma mexicanum Ambystoma mexicanum Bukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;

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Result
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ALIGNMENTS	ABQ70842 ABLZ6522 AAD53222 ABLL0170 AAD14603 AAD14614 AAD14604	AAF28526 AAR201425 08 ADH4284 2 ADP94043 ADF94043 ADL41979 ADD7607 ADAT9305	ADB91252 ADA56256 AAC75665 ADE95549 ADA41611 ADB91897 ADA57747 ADA57747 ADA57746 ADB91896
	Ab070842 Listeria Ab126522 Drosophil Aad52222 Human chr Ab110170 Drosophil Aad14603 Dengue vi Aad14614 Dengue vi Aad14604 Dengue vi	φοωνη	Adb91252 Human sec Ada56256 Gene enco Aac75665 Human ORF Ade95549 Human NOV Ada41611 Human sec Adb91897 Human sec Ada57747 Bac fragm Ada41610 Human sec Adb91896 Human sec Adb91896 Human sec

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RESULT 1
AAV23217
ID AAV2
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AC AAV2
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DT 28-J
Synthetic.
Saccharomyces
                                                 New artificial promoter libraries - containing consensus promoter sequences and variable spacers, used to generate promoters for optimising expression of genes.
                                                                                                                                                                                                                                                                                                                              Saccharomyces cerevisiae; yeast promoter; optimise; spacer; artificial promoter library; gene expression; ds.
                                                                                                                                                                                                                                                                                                                                                             Saccharomyces cerevisiae promoter Yp13.
                                                                                           WPI; 1998-179062/16.
                                                                                                                Jensen PR,
                                                                                                                                                         23-AUG-1996;
                                                                                                                                                                             25-AUG-1997;
                                                                                                                                                                                                    26-FEB-1998.
                                                                                                                                                                                                                         WO9807846-A1
                                                                                                                                                                                                                                                                 promoter
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                                                                                                                                     (JENS/) JENSEN P R.
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/standard_name= "Yeast promoter"
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This is a Saccharomyces cerevisiae promoter sequence used in the construction of an artificial promoter library of the invention.

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Claim 28; Page 62; 89pp; English.

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	Query Match Best Local Matches 19	ORIGIN	FEATURES				•		COMMENT		JOURNAL		TITLE	AUTHORS	REFERENCE		ORGANISM	SOURCE	KEYWORDS	VERSION	ACCESSION	DEFINITION	Locus	RESULT 1 BD006976	
_	Query Match 100.0%; Score 191; DB 6; Length 191; Best Local Similarity 100.0%; Pred. No. 4e-101; Matches 191; Conservative 0; Mismatches 0; Indels 0; Gaps 0;	/organism="Saccharomyces cerevisiae" /mol_type="genomic DNA" /db_xref="taxon:4932"	Location/Qualifiers	promoter	CC Topology: Linear; FH Key Location/Onalifiers		PF 25-AUG-1997 JP 1998510287	PN JP 2001503249-A/45	OS Saccharomyces cerevisiae (yeast)	PETER RUDAR JANSSEN	Patent: JP 2001503249-A 45 13-MAR-2001;	4		Hammer, K. and Janssen, P.R.	l (bases 1 to 191)	Eukaryota; Fungi; Ascomycota; Saccharomycotina; Saccharomycetes;	Saccharomyces cerevisiae	Saccharomyces cerevisiae (baker's yeast)	JP 2001503249-A/45.	BD006976.1 GI:18635347	BD006976	Artificial promoter libraries for selected organisms and promoters	BD006976 191 bp DNA linear PAT 31-JAN-2002		

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1 GAATTCGTGACTCACTAGGCAGGTCACGTTGGCTCTTCGCGGCGCGAGGTTCGTATGCCGC 60

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Copyright (c) 1993 - 2005 Compugen Ltd.
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ir51007.x
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CC867413 NDL.1715.	CC150321 NDL.60C14	CC870420 NDL.129J8	CL843043 OR_CBa007	BX131577 Danio rer	CC874751 NDL.36A22	BX160384 Danio rer	BX187483 Danio rer	CC860315 NDL.113E1	BX184773 Danio rer	CL750452 OR_BBa011	BX121165 Danio rer	CD293432 StrPu536.	CC632440 OGWCP53TV	CC632433 OGWCP53TH	BM504542 ig87e02.x	BP102832 BP102832	BH873913 hp47d04.g	BH004907 BMBAC08M2	BZ950076 CH240_39C	CC842207 NDL.97010

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Copyright (c) 1993 - 2005 Compugen Ltd
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New artificial promoter libraries - containing consensus promoter sequences and variable spacers, used to generate promoters for optimising expression of genes.

This is a Saccharomyces cerevisiae promoter sequence used in the construction of an artificial promoter library of the invention.

The

Claim 28; Page 62; 89pp; English

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Minimum
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REFERENCE AUTHORS TITLE ACCESSION VERSION KEYWORDS SOURCE ORGANISM RESULT 1 BD006977 LOCUS DEFINITION ORIGIN COMMENT FEATURES Query Match 100.0%; Best Local Similarity 100.0%; Matches 167; Conservative 0 JOURNAL source derived from such libraries Patent: JP 2001503249-A 46 13-MAR-2001; PETER RUDAR JANSSEN OS Saccharomyces cerevisiae (yeast) PN JP 200150249-A/46 PD 13-MAR-2001 PF 25-AUG-1997 JP 1998510287 PF 25-AUG-1997 JP 1998510287 PR 23-AUG-1996 DK 0886/96 PI KALIN HAMMER, PETER RUDAR JANSSEN PC C12N15/09, c12N15/00 CC Strandedness: Double; FH Key FH Key FF Promoter (8) (167). Artificial promoter libraries for derived from such librarian 1 (bases 1 to 167) Hammer, K. and Janssen, P.R. Artificial promoter libraries for selected organisms Saccharomyces cerevisiae (baker's yeast) Saccharomyces cerevisiae Eukaryota; Fungi; Ascomycota; Saccharomycotina; BD006977 BD006977.1 GI:18635348 JP 2001503249-A/46. Saccharomycetales; /organism="Saccharomyces cerevisiae" /mol_type="genomic DNA" /db_xref="taxon:4932" Location/Qualifiers (8). (167). Location/Qualifiers Saccharomycetaceae; Saccharomyces. Score 167; DB 6; Pred. No. 7.1e-80; ; Mismatches 0; DNA linear | selected organisms Length 167; Saccharomycetes; PAT 31-JAN-2002 and promoters and promoters

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                                                                                                                                                                                                                                                                                                                                     Submitted (02-AUG-2001) Asao Fujiyama, The Institute of Physical and Chemical Research (RIKEN), Genomic Sciences Center (GSC); 1-7-22 Subhiro-chou, Tsurumi-ku, Yokohama, Kanagawa 230-0045, Japan (E-mail:chimpbeg@ggc.riken.go.jp, UKL:http://hgp.gsc.riken.go.jp/, Tel:81-45-503-911, Fax:81-45-503-9170)
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Mammalia; Eutheria; Primates; Catarrhini; Hominidae;
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/mol_type="genomic DNA"
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 12.6%;
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GSS 03-NOV-2001 survey sequence.

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sai26f04.
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RESULT 1
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ID AAV2
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                                                                                   Jensen
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New artificial promoter libraries - c sequences and variable spacers, used expression of genes.

containing consensus promoter to generate promoters for optimising

WPI; 1998-179062/16.

Claim 28; Page 63; 89pp; English.

This is a Saccharomyces cerevisiae promoter sequence used in the construction of an artificial promoter library of the invention. The

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Minimum
Maximum
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REFERENCE AUTHORS TITLE ACCESSION VERSION KEYWORDS SOURCE ORGANISM RESULT 1 BD006978 LOCUS DEFINITION ORIGIN COMMENT FEATURES Query Match Best Local Similarity Matches 191; Conserv JOURNAL Bource Hammer, K. and Janssen, P.R. Artificial promoter libraries for selected derived from such libraries Patent: JP 2001503249-A 47 13-MAR-2001; PETER RUDAR JANSSEN Saccharomyces cerevisiae (baker's yeast) Saccharomyces cerevisiae Eukaryota; Fungi; Ascomycota; Saccharomycotina; Saccharomycetes; Saccharomycetales; Saccharomycetaceae; Saccharomyces. BD006978.1 GI:18635349 JP 2001503249-A/47. BD006978 Artificial promoter libraries l (bases 1 to 191 dammer, K. and Jans 100.0%; Score 191; DB 6; 1 (larity 100.0%; Pred. No. 2.5e-107; Conservative 0; Mismatches 0; promoter KALIN HAMMER, PETER RUDAR JANSSEN C12N15/09,C12N15/00 Strandedness: Double; Saccharomyces cerevisiae (yeast) JP 2001503249-A/47 l'opology: Linear; 25-AUG-1997 JP 1998510287 23-AUG-1996 DK 0886/ from such libraries. Location/Qualifiers (8). .(191). Location/Qualifiers organism="Saccharomyces/mol_type="genomic DNA"/db_xref="taxon:4932" 0886/96 bp DNA s for selected cerevisiae" Length 191; linear P organisms PAT 31-JAN-2002 and promoters and

1 GAATTCGTGACTCACCGCTCGGGGTGCAGGGCCAAGGCGGCGGAATGTGCGGGGGCGTTCTA 60

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TITLE JOURNAL COMMENT REFERENCE AUTHORS RESULT 1 CL582491/c LOCUS ORIGIN SOURCE ORGANISM ACCESSION VERSION KEYWORDS FEATURES source DEFINITION Arizona Genomics Institute University of Arizona Forbes Building Room 303, Tu Tel: 520 626 9595 Fax: 520 621 1259 Plate: 0047 row: L column: 19 Seg primer: CAC TCA TTA GGC ACC CCA Class: BAC ends. BACKWARD: CAC TCA TTA GGC ACC CCA Insert Length: 145000 Std Error: 0.00 Plate: 0047 row: L column: 19 Kim, H., Yu, Y., Summarkudrna, D., Muller, C., Eukaryota; Viridiplantae; Streptophyta; Embryophyta; Tracheophyta; Spermatophyta; Magnoliophyta; Liliopsida; Poales; Poaceae; Ehrhartoideae; Oryzeae; Oryza. 1 (bases 1 to 775) Oryza brachyantha Oryza brachyantha CL582491 775 bp DNA linear GS: OB_Ba0047L19.r OB_Ba Oryza brachyantha genomic clone OB_Ba0047L19 3', genomic survey sequence. CL582491 Unpublished (2004) SSD CL582491.1 GI:48540712 Email: http://genome.arizona.edu PCR PRimers Contact: Rod A. Wing FORWARD: TAA TAC GAC TCA CTA TAG /dev_stage="mature" /lab_host="DH10B" /clone_lib="OB__Ba" /note="Vector:_pagIBAC1; Site_1: HindIII; Site_2: HindIII" /organism="Oryza brachyantha" /mol_type="genomic DNA" /db_xref="taxon:4533" Location/Qualifiers |. .775 clone="OB_Ba0047L19" tissue_type="leaves" Stum, D., Hatfield, J., Tucson, ନ୍ଧ Rao, K., Luo, M., Jetty, R., Soderlund, C. and Wing, R. AZ 85721-0036, GSS 10-JUN-2004

Query Match Best Local Similarity

10.5%;

Score 20; pred. No.

DB 9; 3.4;

Length 775;

Title: Perfect score:

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     This is a Saccharomyces cerevisiae promoter sequence used in the construction of an artificial promoter library of the invention.
                                                                                               New artificial promoter libraries - containing consensus promoter sequences and variable spacers, used to generate promoters for optimising expression of genes.
                                                                                                                                                                        WPI; 1998-179062/16.
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                                                            Claim 28; Page 63; 89pp; English
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100.0%; Sc Similarity 100.0%; Pr 5; Conservative 0;	FH Key FT promoter Location/Qua 1. 195 /organism="S /mol type="g /db_xref="ta	PN JF 2001503249-A/48 PD 13-MAR-2001 PF 25-AUG-1997 JF 1998510287 PR 23-AUG-1996 DK 0886/96 PI KALIN HAWMER, PETER RUDAR JANSSEN PC C12N15/09, C12N15/00 CC Strandedness: Double;	Patent: UP 2001503249-A 48 13-MAR-2001; PETER RUDAR JANSSEN OS Saccharomyces cerevisiae (yeast)	Saccharomycetales; Saccharomycetaceae; Saccharomycets. 1 (bases 1 to 195) Hammer, K. and Janssen, P.R. Artificial promoter libraries for selected organisms and promote devised from such libraries.	BD006979 BD006979.1 GI:18635350 JP 2001503249-A/48. Saccharomyces cerevisiae (bak Saccharomyces cerevisiae	BD006979 Artificial promoter libraries derived from such libraries.
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REFERENCE AUTHORS TITLE FEATURES SOURCE ORGANISM VERSION KEYWORDS RESULT 1 AW003938/c LOCUS COMMENT ACCESSION DEFINITION JOURNAL gource Contact: Robert Strausberg, Ph.D.
Email: cgapbs-r@mail.nih.gov
Tissue Procurement: Christopher A. Moskaluk, M.D.;
R. Emmert-Buck, M.D., Ph.D.
CDNA Library Preparation: M. Bento Soares, Ph.D., Clone distribution: NCI-CGAP clone di found through the I.M.A.G.B. Consortiu www.bio.llnl.gov/bbrp/image/image.html Seq primer: -40UP from Gibco. Mammalia; Eutheria; Primates; Catarrhini; Hominid 1 (bases 1 to 450) NCI-CGAP http://www.ncbi.nlm.nih.gov/ncicgap. National Cancer Institute, Cancer Genome Anatomy wq84f04.x1 NCI_CGAP_GC6 Bonaldo, Ph.D. Unpublished (1997) Tumor Gene Index Homo sapiens AW003938.1 AW003938 Sukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Homo sapiens (human) cDNA Library Arrayed by: Greg Lennon, DNA Sequencing by: Washington Univers /clone lib="NCI_CGAP_GC6"
/note="Vector: pT7T3D-Pac (Pharmacia) with a modified
/note="Vector: pT7T3D-Pac (Pharmacia) with a modified
polylinker; Site 1: Not I; Site 2: Eco RI; Plasmid DNA
from the normalized library NCI CGAP GC4 was prepared, and
ss circles were made in vitro. Following HAP purification,
this DNA was used as tracer in a subtractive hyporidization
reaction. The driver was PCR-amplified cDNAs from a pool
of 5,000 clones made from the same library (cloneIDs organism="Homo sapiens"

mol_type="mRNA"

db_xref="taxon:9606" lab tissue_type="pooled germ cell tumors" ocation/Qualifiers clone="IMAGE:2478751" GI:5850854 host="DH108" NCI-CGAP clone distribution 450 bp mRNA linear EST 08-SEP-1999 Homo sapiens cDNA clone IMAGE:2478751 3', Consortium/LLNL University Ph.D Genome Sequencing Center ibution information can be Hominidae; Project (CGAP), M. Fatima Ph.D., Michael Homo

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ALIGNMENTS

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ID AAV23221 standard; DNA; 179
26-FEB-1998.
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Saccharomyces
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                                                                                                                                                                                                                             Saccharomyces cerevisiae promoter Yp183.
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                                                                                                                                                                                                                                                         AAV23221;
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                                                                                                                                                                                       cerevisiae.
                                                                                                                                                                  Location/Qualifiers
8. .179
                                                                                                                                                    standard_name= "Yeast promoter"
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This is a Saccharomyces cerevisiae promoter sequence used in the construction of an artificial promoter library of the invention.

The

Claim 28; Page 64; 89pp;

English.

New artificial promoter libraries - containing consensus promoter sequences and variable spacers, used to generate promoters for optimising expression of genes.

WPI; 1998-179062/16. Jensen PR, Hammer K; 23-AUG-1996; 25-AUG-1997;

96DK-00000886. 97WO-DK000342

(JENS/) JENSEN P R.

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Result
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ALIGNMENTS

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AUTHORS
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VERSION
KEYWORDS
SOURCE
ORGANISM
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BD006980
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DEFINITION
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source
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 Query Match
Best Local Similarity
Matches 179; Conserv
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                                                                                                                                                                PETER RUDAR JANSSEN
OS Saccharomyces oc
PN JP 2001503249-A,
PD 13-MAR-2001
PF 25-AUG-1997 JP 1
PR 23-AUG-1997 JP 1
PR 23-AUG-1997 JY 1
PR 23-AUG-1997 JX 2
PR 23-AUG-1997 JX 2
PR C212N15/09,C12N15
PC C12N15/09,C12N15
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PC C12N15/09,C12N15
PC C12N15/09,C12N15
PC Topology: Lineau
FH Key
PT promoter
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             derived from such libraries Patent: JP 2001503249-A 49 13-MAR-2001;
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Hammer, K. and Janssen, P.R.
Artificial promoter libraries for selected
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Saccharomyces cerevisiae
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JP 2001503249-A/49.
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Saccharomycetales; Saccharomycetaceae; Saccharomyces.
                                                                                                                                                                                                             23-AUG-1996 DK 0886/96
KALIN HAMMER, PETER RUDAR JANSSEN
C12N15/09, C12N15/00
Strandedness: Double;
 100.0%;
Conservative 0
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JP 2001503Z49-A/49
13-MAR-2001
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Location/Qualifiers
                                                                             /organism="Saccharomyces cerevisiae"
/mol_type="genomic DNA"
/db_xref="taxon:4932"
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Score 179; DB 6;
Pred. No. 3.9e-90;
Mismatches 0;
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NDL.101P CSU-K33r CSU-K34.	N N N		4 43461.1 C PUDIX66TD 5 NDL.51H12 5 Tetraodon		3 NDL.1715. 6 PRI013a E 8 PRI0144a 4 NDL.124E2 7 NDL.22G12

RESULT 1 AW003938/c

REFERENCE AUTHORS TITLE JOURNAL COMMENT SOURCE ORGANISM ACCESSION VERSION KEYWORDS LOCUS DEFINITION FEATURES source Tumor Gene Index
Unpublished (1997)
Contact: Robert Strausberg, Ph.D.
Email: cgapbs-r@mail:nih.gov found through the I.M.A.G.E. Consortium/LLNL www-bio.llnl.gov/bbrp/image/image.html Seq primer: -40UP from Gibco. Seg primer: -40UP Bonaldo, NCI-CGAP http://www.ncbi.nlm.nih.gov/ncicgap. National Cancer Institute, Cancer Genome Anat wq84f04.x1 NCI_CGAP_GC6 cDNA Library Arrayed by: Greg Lennon, Ph.D.
DNA Sequencing by: Washington University Genome
Clone distribution: NCI-CGAP clone distribution Tissue Procurement: Christopher A. Moskaluk, M.D., Bukaryota; Metazoa; Chordata; Mammalia; Eutheria; Primates; Homo sapiens Homo sapiens (human) AW003938.1 GI:5850854 R. Emmert-Buck, M.D., Ph.D. CDNA Library Preparation: M. Bento Soares, Ph.D., (bases 1 to 450) /Clone lib="NCI CGAP GC6"
/clone lib="NCI CGAP GC6"
/note="Vector: pT7T3D-Pac (Pharmacia) with a modified
polylinker; Site 1: Not I; Site 2: Eco RI; Plasmid DNA
from the normalized library NCI CGAP GC4 was prepared, and
ss circles were made in vitro. Following HAP purification,
this DNA was used as tracer in a subtractive hybridization
reaction. The driver was FCR-amplified cDNAs from a pool
of 5,000 clones made from the same library (cloneIDs
1257096-1258631, 1469064-1470983, and 1475592-1476743). Ph.D. /tissue_type="pooled germ /lab_host="DH10B" organism="Homo sapiens' /mol_type="mRNA" /db_xref="taxon:9606" Location/Qualifiers clone="IMAGE:2478751" .450 450 Homo bp mRNA linear EST 08-SEP-1999 sapiens cDNA clone IMAGE:2478751 3', Craniata; Vertebrata; Catarrhini; Hominidae; cell tumors" Anatomy Project (CGAP), Sequencing Center information can be M. Fatima Ph.D., Euteleostomi; Homo. Michael

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AAZ01425_08

This is a Saccharomyces cerevisiae promoter sequence used in the construction of an artificial promoter library of the invention.

The

Claim 28; Page 64-65; 89pp; English.

New artificial promoter libraries - containing consensus promoter sequences and variable spacers, used to generate promoters for optimising expression of genes.

Jensen

Hammer K;

23-AUG-1996;

96DK-00000886.

(JENS/) JENSEN P R. PR,

WPI; 1998-179062/16.

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•	Aas63324 Chemicall	Abl32866 Human imm	Abn80118 Human che	Abl70234 Chemicall	Abk31273 Signal tr	Abl33133 Human imm	Abl32815 Human imm	Abl10170 Drosophil	Adn05625 Antipsori	Adb47467 Human cDN	Abx63327 Human cDN	Abq70842 Listeria	Adf03385 Bacterial	Ada68824 Arabidops	Abz15437 Arabidops	Aad27607 Synechocy	Ads47979 Bacterial			Abq44458 Oligonucl	Adl11516 Cat flea	Abz72701 Detection	Abn49863 Human spl	Aaa65331 Angiotens	Adh42842 Novel hum

ALIGNMENTS

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RESULT 1
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Saccharomyces
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                                                                                                                                                    promoter
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/standard_name= "Yeast promoter"
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expression; ds.
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Saccharomycotina; Saccharomycotina; Saccharomycetes;
Bukaryota; Pungi; Ascomycota; Saccharomyceta; Saccharomyces.
100.0%;
larity 100.0%;
Conservative 0;
                                      /organism="Saccharomyces cerevisiae"
/mol_type="genomic DNA"
/db_xref="taxon:4932"
                                                                      Location/Qualifiers
Score 195; DB 6;
Pred. No. 3.3e-100;
Mismatches 0;
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REFERENCE AUTHORS TITLE JOURNAL COMMENT SOURCE ORGANISM ACCESSION VERSION KEYWORDS RESULT 1 AW003938/c LOCUS FEATURES DEFINITION source found through the I.M.A.G.B. Consortium/LLNL at: www-bio.llnl.gov/bbrp/image/image.html
Seq primer: -40UP from Gibco. Tumor Gene Index
Unpublished (1997)
Contact: Robert Strausberg,
Email: cgapbs-r@mail.nih.gov Bonaldo, wq84f04.x1 NCI_CGAP_GC6 cDNA Library Arrayed by: Greg Lennon, Ph.D.
DNA Sequencing by: Washington University Genome
Clone distribution: NCI-GAP clone distribution fissue Procurement: Christopher A. Moskaluk, M.D., NCI-CGAP http://www.ncbi.nlm.nih.gov/ncicgap. National Cancer Institute, Cancer Genome Anat Eukaryota; Metazoa; Chordata; Mammalia; Eutheria; Primates; 1 (bases 1 to 450) Homo sapiens Homo sapiens (human) AW003938.1 GI:5850854 AW003938 AW003938 cDNA Library Preparation: M. Bento Soares, Ph.D., Emmert-Buck, M.D., /clone lib="NCI GAAP GC6"
/clone lib="NCI GAAP GC6"
/note="Vector: pT773D-Pac (Pharmacia) with a modified
polylinker; Site 1: NcI I; Site 2: Eco RI; Plasmid DNA
from the normalized library NCI CGAP GC4 was prepared, and
scircles were made in vitro. Following HAP purification,
this DNA was used as tracer in a subtractive hybridization
reaction. The driver was PCR-amplies from a pool
of 5,000 clones made from the same library (clonelDs
1257096-1258631, 1469064-1470983, and 1475592-1476743).
Subtraction by Bento Soares and M. Fatima Bonaldo. " Ph.D. /organism="Homo sapiens"
/mol_type="mRNA"
/db_xref="taxon:9606" ocation/Qualifiers tissue_type="pooled germ cell tumors" 'lab_host="DH10B" clone="IMAGE:2478751" .450 Ph.D. 450 bp mRNA linear EST 08-SEP-1999 Homo sapiens cDNA clone IMAGE:2478751 3', ovo. Ph.D. Craniata; Vertebrata; Catarrhini; Hominidae; Genome Anatomy Project (CGAP), information can be M. Fatima Ph.D., Michael Euteleostomi; Homo.

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Result
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This is a Saccharomyces cerevisiae promoter sequence used in the construction of an artificial promoter library of the invention.

The

New artificial promoter libraries - containing consensus promoter sequences and variable spacers, used to generate promoters for optimising expression of genes.

WPI; 1998-179062/16.

Claim 28;

Page 65; 89pp;

English.

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Result
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FEATURES source REFERENCE AUTHORS TITLE SOURCE ORGANISM ACCESSION VERSION KEYWORDS RESULT 1 BD006982 LOCUS DEFINITION ORIGIN COMMENT Query Match Best Local Similarity Matches 193; Conserv JOURNAL 1 (bases 1 to 193) Hammer, K. and Janssen, P.R. Artificial promoter libraries for selected derived from such libraries Patent: JP 2001503249-A 51 13-MAR-2001; PETER RUDAR JANSSEN SEGERGOOOFF Saccharomyces cerevisiae Eukaryota; Fungi; Ascomycota; Saccharomycotina; Saccharomycetes; Saccharomyces cerevisiae (baker's yeast) JP 2001503249-A/51 BD006982 193 bp DNA linear I Artificial promoter libraries for selected organisms BD006982.1 GI:18635353 derived from such libraries. Saccharomycetales; Saccharomycetaceae; 100.0%; ilarity 100.0%; Conservative 0; KALIN HAMMER, PETER RUDAR JANSSEN C12N15/09, C12N15/00 Strandedness: Double; Saccharomyces cerevisiae (yeast) JP 2001503249-A/51 13-MAR-2001 25-AUG-1997 JP 1998510287 23-AUG-1996 DK 0886/ Popology: Linear; Location/Qualifiers (8). (189). Location/Qualifiers /organism="Saccharomyces cerevisiae" /mol_type="genomic DNA" /db_xref="taxon:4932" Score 193; DB 6; Pred. No. 7.9e-89; Mismatches 0; 96/9880 Saccharomyces Length 193; organisms PAT 31-JAN-2002 and promoters

1 GAATTCGTGACTCAATGCTGCGGGGGGCGGCAGGAGTCTGGTGTAACTTCCCCATTTTGAGTGA

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AA856829 Od83b08.s
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BH286542 CH230-118
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CL698765 SP Ba003
AW979129 EST39123
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AZ572687 308PvH01
BW446905 BW446905
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ORIGIN

Query Match Best Local Similarity

10.4%; Score 20; 100.0%; Pred. No.

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Length 327;

ORIGIN	FEATURES Source	COMMENT	AL RS	DEFINITION ACCESSION VERSION VERSION KEYWORDS SOURCE ORGANISM	RESULT 1	00000 0 00000 000000000000000000000000	
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This is a Saccharomyces cerevisiae promoter sequence used in the construction of an artificial promoter library of the invention. The
                                   Claim 28; Page 66; 89pp; English.
                                                        New artificial promoter libraries - containing consensus promoter sequences and variable spacers, used to generate promoters for optimising expression of genes.
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y Match 100.0%; Score 166; DB 6; Length 166; Local Similarity 100.0%; Pred. No. 2.1e-84; hes 166; Conservative 0; Mismatches 0; Indels 0; Gaps 0;	/organism="Saccharomyces cerevisiae" /mol_type="genomic DNA" /db_xref="taxon:4932"		moter Tocation/Ona	FH Key Location/Qualifiers	CC Strandedness: Double;	PC C12N15/09, C12N15/00	PR 23-AUG-1996 DK 0886/96	19985	PD 13-MAR-2001	JP 2001503249-A/52	OS Saccharomyces cerevisiae (yeast)	Patent: JP 2001503249-A 52 13-MAR-2001;		Hammer, K. and Janssen, P.R.	1 (bases 1 to 166)	Eukaryota; Fungi; Ascomycota; Saccharomycotina; Saccharomycetes;	Saccharomyces cerevisiae	Saccharomyces cerevisiae (baker's yeast)	249-A/52.	BD006983.1 GI:18635354	derived from such libraries.	es for selected organisms	BD006983 166 bp DNA linear PAT 31-JAN-2002	

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CC141557	CC075473	CC853848	CB451827	CB440185	CC117932	CC139977	·CC121245	CB449507	CC085442	CC123851	CC851377	CC1:26051	CC116691	CC138744	CC087331	CC864019	CC142414	CC134423	CC136676	CCIS3398
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WPI; 1998-179062/16.

Jensen PR,

Hammer K;

(JENS/) JENSEN P R.

23-AUG-1996;

96DK-00000886

This is a Saccharomyces cerevisiae promoter sequence used in the construction of an artificial promoter library of the invention. The

Claim 28; Page 66; 89pp; English.

New artificial promoter libraries - containing consensus promoter sequences and variable spacers, used to generate promoters for optimising expression of genes.

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ALIGNMENTS

ACCESSION VERSION KEYWORDS SOURCE ORGANISM RESULT 1 BD006984 LOCUS DEFINITION REFERENCE AUTHORS TITLE ORIGIN FEATURES COMMENT Query Match Best Local Similarity Matches 195; Conserv JOURNAL source PETER RUDAR JANSSEN OS Saccharomyces ce PN JP 2001503249-A/ PD 13-MAR-2001 PP 25-AUG-1997 JP 1 PR 23-AUG-1996 DK PI KALIN HAMMER, DET PC C12N15/09, C12N15 CC Strandedness: Do CC Topology: Linear FH Key FT promoter Hammer, K. and Janssen, P.R. Artificial promoter libraries for selected derived from such libraries Patent: JP 2001503249-A 53 13-MAR-2001; Artificial promoter libraries for derived from such libraries. BD006984 Bukaryota; Fungi; Ascomycota; Saccharomycotina; Saccharomycetes; Saccharomycetales; Saccharomycetaceae; Saccharomyces. Saccharomyces cerevisiae Saccharomyces cerevisiae (baker's yeast) 100.0%; larity 100.0%; Conservative 0; KALIN HAMMER, PETER RUDAR JANSSEN C12N15/09, C12N15/00 Strandedness: Double; Saccharomyces cerevisiae (yeast) JP 2001503Z49-A/53 13-MAR-2001 25-AUG-1997 JP 1998510287 23-AUG-1996 DK 0886/ Proposogy: Linear; /organism="Saccharomyces /mol_type="genomic DNA" /db_xref="taxon:4932" Location/Qualifiers GI:18635355 Location/Qualifiers (8). .(190). Score 195; DB 6; Pred. No. 3.3e-103; Mismatches 0; 0886/96 cerevisiae" DNA selected Length 195; linear P organisms PAT 31-JAN-2002 and and promoters promoters

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This is a Saccharomyces cerevisiae promoter sequence used in the construction of an artificial promoter library of the invention. The

Claim 28; Page 67; 89pp; English.

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Result
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ALIGNMENTS

Q Y	Query Match Best Local : Matches 18	ORIGIN	FEATURES source	*			COMMENT	JOURNAL	AUTHORS TITLE	REFERENCE	CVOLANTOIL	SOURCE	KEYWORDS	ACCESSION	RESULT 1 BD006985 LOCUS DEFINITION
1 GAATTCGTACTCACGACAGCGTTATGACTTCGAGGACCAGCTACTTCCGGTCGCGTACTA 60	Query Match 100.0%; Score 188; DB 6; Length 188; Best Local Similarity 100.0%; Pred. No. 7.1e-95; Matches 188; Conservative 0; Mismatches 0; Indels 0; Gaps 0;	/organism="saccharomyces cerevisiae" /mol_type="genomic DNA" /db_xref="taxon:4932"		кеу		13-MAR-2001 25-AUG-1997 JP 19985		Patent: JP 2001503249-A 54 13-MAR-2001; PETER RUDAR JANSSEN	Hammer, K. and Janssen, P.R. Artificial promoters for selected organisms and promoters	1 (bases 1 to 188)	Eukaryota; Fungi; Ascomycota; Saccharomycotina; Saccharomycetes;	Saccharomyces cerevisiae (baker's yeast)	JP 2001503249-A/54.	BD006985	BD006985 Artificial promoter libraries for selected organisms and promoters derived from such libraries.

	GenCore version 5.1.6 Copyright (c) 1993 - 2005 Compugen Ltd.	
OM nucleic - nuc	nucleic search, using sw model	
Run on:	June 21, 2005, 20:41:42 ; Search time 1549.73 Seconds (without alignments) 4617.633 Million cell updates/sec	
Title: Perfect score: Sequence:	US-09-242-657B-54 188 1 GAATTCGTACTCACGACAGCTCGCTACCAATCATGGATCC 188	
Scoring table:	OLIGO NUC Gapop 60.0 , Gapext 60.0	
Searched:	34239544 seqs, 19032134700 residues	
Word size :	. 0	
Total number of	hits satisfying chosen parameters: 68479088	
Minimum DB seq l Maximum DB seq l	length: 0 length: 2000000000	
Post-processing:	: Listing first 45 summaries	
Database :	EST: * 1: gb_est1: * 2: gb_est2: * 3: gb_htc: * 4: gb_est3: * 5: gb_est4: * 6: gb_est6: * 7: gb_est6: * 8: gb_gss1: * 9: gb_gss2: *	
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TITLE
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MEDLINE
PUBMED
COMMENT REFERENCE AUTHORS ACCESSION VERSION KEYWORDS SOURCE ORGANISM RESULT 1
CE047678
LOCUS
DEFINITION 멼 Ś ORIGIN FEATURES Matches Query Match Best Local Similarity source 141 201 Canis familiaris (dog)
Canis familiaris (dog)
Canis familiaris
Eukaryota, Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Carnivora; Fissipedia; Canidae; Canis.

1 (bases 1 to 576)
Kirknes, E.F., Bafna, V., Halpern, A.L., Levy, S., Remington, K.,
Rusch, D.B., Delcher, A.L., Pop, M., Wang, W., Fraser, C.M. and
Venter, J.C. CE047678

tigr-gss-dog-17000357487772 Dog Library Canis familiaris genomic, genomic survey sequence.
CE047678
CE047678 GI:35086580 Contact: Kirkness EF
The Institute for Genomic Research
Department of Eukaryotic Genomics, TIGR, 9712 Medical Center Drive,
Rockville, MD-20850, USA The dog genome: survey sequencing and comparative analysis Science 301 (5641), 1898-1903 (2003) 22875432 Tel: 301-838-0200 Fax: 301-838-0208 TTTTTCGTTTGTTACAATAAT 161 11.2%; Score 21; DB 9; ilarity 100.0%; Pred. No. 1.3; Conservative 0; Mismatches ekirknes@tigr.org /organism="Canis familiaris"
/mol_type="genomic_DNA"
/mol_type="genomic_DNA"
/strain="Standard Poodle"
/db_xref="taxon:9615"
/clone_lib="Dog_Library"
/note="Site_1: BstXI; Libraries were prepared from peripheral blood" TTGTTACAATAAT 221 ocation/Qualifiers Length 576; Indels 0, Gaps 0

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28-JUL-1998 (first entry)

AAV23227 standard; DNA; 195 BP.

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ALIGNMENTS

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                                     New artificial promoter libraries - of sequences and variable spacers, used expression of genes.
                                                                                                                                                                                                            promoter
                                                                                                                                                                                                                     Key
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                                                                       WPI; 1998-179062/16.
                                                                                      Jensen PR, Hammer K;
                                                                                                                        23-AUG-1996;
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                                                                                                                                                                           WO9807846-A1
                                                                                                        (JENS/) JENSEN PR.
                                                                                                                                                                                                                                      cerevisiae.
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/stamdard_name= "Yeast promoter"
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                                              containing consensus promoter to generate promoters for optimising
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This is a Saccharomyces cerevisiae promoter sequence used in the construction of an artificial promoter library of the invention.

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Claim 28; Page 67; 89pp; English.

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Database :
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REFERENCE AUTHORS TITLE ACCESSION VERSION KEYWORDS SOURCE ORGANISM RESULT 1 BD006986 LOCUS FEATURES COMMENT ORIGIN DEFINITION Query Match Best Local S Matches 195 JOURNAL source 1 (bases 1 to 195) Hammer, K. and Janssen, P.R. Artificial promoter libraries for selected derived from such libraries Patent: JP 2001503249-A 55 13-MAR-2001; PETER RUDAR JANSSEN PACCUPAL PROS BD006986.1 GI:18635357 JP 2001503249-A/55. h 100.0%; Score 195; DB 6; 1 Similarity 100.0%; Pred. No. 6.7e-102; 95; Conservative 0; Mismatches 0; Saccharomyces cerevisiae Eukaryota; Fungi; Ascomycota; Saccharomycotina; Saccharomycetales; Saccharomycetaceae; Saccharon Saccharomyces cerevisiae (baker's yeast) derived from such libraries. BD006986 Artificial promoter libraries Cl2N15/09,Cl2N15/00 Strandedness: Double; Saccharomyces cerevisiae JP 2001503249-A/55 13-MAR-2001 Topology: Linear; 25-AUG-1997 JP 1998510287 23-AUG-1996 DK 0886/ KALIN HAMMER, PETER RUDAR JANSSEN /organism="Saccharomyces cerevisiae" /mol_type="genomic_DNA" /db_xref="taxon:4932" Location/Qualifiers .195 Location/Qualifiers g for (yeast) Belected Saccharomyces Length 195; organisms organisms linear Saccharomycetes; PAT 31-JAN-2002 and promoters and

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/clone_lib="NGI_CGAP_GC6" /clone_lib="NGI_CGAP_GC6" /note="Vector: pT713D-Pac (Pharmacia) with a modified /note="Vector: pT713D-Pac (Pharmacia) with a modified polylinker; Site 1: Not 1; Site 2: Bco RI; Plasmid DNA from the normalized library NCI_CGAP_GC4 was prepared, and se circles were made in vitro. Following HAP purification, this DNA was used as tracer in a subtractive hybridization reaction. The driver was PCR-amplified cDNAs from a pool of 5,000 clones made from the same library (cloneIDs 1257096-1258631, 1469064-1470933, and 1475592-1476743). Subtraction by Bento Soares and M. Fatima Bonaldo. "	1450 /Organism="Homo sapiens" /mol_type="mxNA," /db_xref="taxon:9606" /clone="IMAGE:2478751" /tissue_type="pooled germ cell tumors" /lab host="pH108"	www-bio.llnl.gov/bbrp/image/image.html Seq primer: -40UP from Gibco. Location/Qualifiers	Tissue Procurement: Christopher A. Moskaluk, M.D., Ph.D., Michael R. Emmert-Buck, M.D., Ph.D. CDNA Library Preparation: M. Bento Soares, Ph.D., M. Fatima Bonaldo. Ph.D.	Unpublished (1997) Contact: Robert Strausberg, Ph.D. Email: cgapbe_remail_nih_cov	NCI-CGAP http://www.ncbi.nlm.nih.gov/ncicgap. National Cancer Institute, Cancer Genome Anatomy Project (CGAP), Tumor Gene Index	Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo. 1 (bases 1 to 450)	EST. Homo sapiens (human) Homo sapiens	nce.	AW003938 450 bp mRNA linear EST 08-SEP-1999 wq84f04.x1 NCI CGAP GC6 Homo sapiens chwa clone Twace.2/19251 2/

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L Patent: JP 2001503249-A 56 13-MAR-2001;
PETER RUDAR JANSSEN

OS Saccharomyces cerevisiae (yeast)
JP 2001503249-A/56

PD 13-MAR-2001

PF 25-AUG-1997 JP 1998510287

PF 25-AUG-1997 DK 0886/96

PI KALIN HAWMER, PETER RUDAR JANSSEN

PC C12N15/09,C12N15/00

CC Strandedness: Double;
FH Key

FT promoter (8) (184) Artificial promoter libraries for selected organisms derived from such libraries. Saccharomyces cerevisiae
Eukaryota; Fungi; Ascomycota; Saccharomycotina; Saccharomycetes;
Saccharomycetales; Saccharomycetaceae; Saccharomyces. BD006987.1 GI:18635358 JP 2001503249-A/56. 1 (bases 1 to 189) Hammer, K. and Janssen, P.R. Saccharomyces cerevisiae (baker's yeast) 100.0%; Score 189; DB 6; Length 189; ilarity 100.0%; Pred. No. 2.4e-98; Conservative 0; Mismatches 0; Indels /organism="Saccharomyces /mol_type="genomic DNA" /db_xref="taxon:4932" Location/Qualifiers
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RESULT 1 AW003938/c LOCUS DEFINITION AW003938 wq84f04.x1 NCI_CGAP_GC6 mRNA sequence. AW003938 AW003938.1 GI:5850854 450 Homo bp mRNA linear EST 08-SEP-1999 sapiens cDNA clone IMAGE:2478751 3',

ALIGNMENTS

REFERENCE AUTHORS SOURCE KEYWORDS ACCESSION VERSION TITLE 1 (bases 1 to 450)
NCI-CGAP http://www.ncbi.nlm.nih.gov/ncicgap..
National Cancer Institute, Cancer Genome Anatomy EST Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo. Homo sapiens (human) Homo sapiens

Email: cgapbs-r@mail.nih.gov Tissue Procurement: Christopher A. Moskaluk, M.D., R. Emmert-Buck, M.D., Ph.D. cDNA Library Preparation: M. Bento Soares, Ph.D., Contact: Robert Strausberg, Ph.D. Ph.D., Michael

COMMENT

JOURNAL

Unpublished (1997)

Project (CGAP),

Bonaldo, M. Fatima

cDNA Library Arrayed by: Greg Lennon, Ph.D.
DNA Sequencing by: Washington University Genome
Clone distribution: NCI-CGAP clone distribution
found through the I.M.A.G.E. Consortium/LLNL at:
www-bio.llnl.gov/bbrp/image/image.html
Seq primer: -40UP from Gibco. Sequencing Center information can be

source ocation/Qualifiers

FEATURES

/clone lib="NCI CGAP GC6"
/clone lib="NCI CGAP GC6"
/note="Vector: pT773D-Pac (Pharmacia) with a modified
/note="Vector: pT773D-Pac (Pharmacia) with a modified
polylinker; Site_1: Not I; Site_2: Eco RI; Plasmid DNA
from the normalized library NCI CGAP GC4 was prepared, and
ss circles were made in vitro. Following HAP purification,
this DNA was used as tracer in a subtractive hybridization
reaction. The driver was PCR-amplified cDNAs from a pool
of 5,000 clones made from the same library (cloneIDs
of 5,000 clones made from the same library (cloneIDs
of 1258031, 1469064-1470983, and 1475592-4476743). organism="Homo sapiens" /mol_type="mRNA" /db_xref="taxon:9606" tissue type="pooled germ cell tumors" lab_host="DH10B" clone="IMAGE: 2478751" . 450

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Saccharomyces cerevisiae; yeast promoter; opt: artificial promoter library; gene expression; Saccharomyces cerevisiae promoter Yp89. 8. .190 /*tag= a /standard_name= "Yeast promoter" Location/Qualifiers BP. optimise; spacer; ion; ds

This is a Saccharomyces cerevisiae promoter sequence used in the construction of an artificial promoter library of the invention. The

New artificial promoter libraries - c sequences and variable spacers, used expression of genes.

containing co

consensus promoter e promoters for optimising

Claim 28; Page 68-69; 89pp; English

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RESULT 1 BD006988 LOCUS DEFINITION

BD006988 195 L Artificial promoter libraries derived from such libraries. BD006988

195 bp DNA linear PAT 31-JAN-2002 ries for selected organisms and promoters

ACCESSION VERSION KEYWORDS SOURCE ORGANISM REFERENCE AUTHORS TITLE JOURNAL derived from such libraries
Patent: JP 2001503249-A 57 13-MAR-2001;
PETER RUDAR JANSSEN Saccharomyces cerevisiae (baker's yeast)
Saccharomyces cerevisiae
Saccharomyces cerevisiae
Saccharomyceta; Fungi; Ascomycota; Saccharomycotina; Saccharomycetales;
Saccharomycetales; Saccharomycetaceae; Saccharomyces. 1 (bases 1 to 195) Hammer, K. and Janssen, P.R. Artificial promoter libraries for selected JP 2001503249-A/57 BD006988.1 GI:18635359 haromycetales; Saccharomycetaceae; organisms and promoters

Saccharomyces cerevisiae (yeast) JP 2001503249-A/57

COMMENT

KALIN HAMMER, PETER RUDAR JANSSEN C12N15/09,C12N15/09 Ctrandedness: Double; 13-MAR-2001 25-AUG-1997 JP 1998510287 23-AUG-1996 DK 0886/

promoter fopology: Linear; oter (8)..(190). Location/Qualifiers ocation/Qualifiers

FEATURES

Bource

/organism="Saccharomyces cerevisiae" /mol_type="genomic DNA" /db_xref="taxon:4932"

ORIGIN

Query Match Best Local S Matches 195 195; 1 GAATTCGTGACTCACTCGGAAGATTGGGTTTACGATTAGGATGGCGCGGCAGAACCGGGG Similarity 100.0%; Score 195; DB 6; I llarity 100.0%; Pred. No. 5.7e-102; Conservative 0; Mismatches 0; Length 195; Indels 0 Gaps

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ORIGIN JOURNAL COMMENT REFERENCE AUTHORS ACCESSION VERSION KEYWORDS LOCUS DEFINITION RESULT 1 CL582491/c FEATURES SOURCE ORGANISM source PIRTE: 0047 row: L column: 19
Seq primer: CAC TCA TTA GGC ACC CCA
Class: BAC ends. Oryza brachyantha
Oryza brachyantha
Oryza brachyantha
Evaryota; Viridiplantae; Streptophyta; Embryophyta; Tracheophyta;
Spermatophyta; Magnoliophyta; Liliopsida; Poales; Poaceae;
Ehrhartoideae; Oryzeae; Oryza.
1 (Dase 1 to 775) Insert Length: 145000 Plate: 0047 row: L c FORWARD: TAA TAC GAC TCA CTA TAG OBACKWARD: CAC TCA TTA GGC ACC CCA Email: http://genome.arizona.edu Arizona Genomics Institute
University of Arizona
Forbes Building Room 303, 7
Tel: 520 626 9595
Fax: 520 621 1259 Unpublished (2004)
Contact: Rod A. Wing OMAP Project CL582491.1 GI:48540712 GSS. CL582491 775 bp DNA linear GSS OB_Ba0047L19.r OB_Ba Oryza brachyantha genomic clone OB_Ba0047L19 3', genomic survey sequence.
CL582491 PCR PRimers Kim, H., Yu, Y., Stum, D.,
Kudrna, D., Muller, C., Ha /mol_type="genomic DNA"
/db_xref="taxon:4533"
/clone="0B_Ba0047L19"
/tissue_type="leaves"
/dev_stage="mature"
/lab_host="PHIOB" /clone_lib="OB_Ba" /note="Vector: pAGIBAC1; Site_1: HindIII; ocation/Qualifiers organism="Oryza brachyantha" . 775 303, Tucson, AZ 85721-0036, USA ., Yost,D., Rao,K., Luo,M., Jetty,R., Hatfield,J., Soderlund,C. and Wing,R. Std Error: 0.00 DNA" ଥ Site_2: HindIII" GSS 10-JUN-2004

Query Match Best Local Similarity

10.3%;

Score 20; Pred. No.

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ALIGNMENTS

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RESULT 1
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ID AAV2
WPI; 1998-179062/16.
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Saccharomyces
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                                                                                                                                                                                                                                                                                           AAV23230 standard; DNA; 176 BP.
                                                                            Jensen PR, Hammer K;
                                                                                                                      25-AUG-1997;
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/*tag= a
/*ard
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                                                                                                                                                               /standard_name= "Yeast promoter"
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This is a Saccharomyces cerevisiae promoter sequence used in the construction of an artificial promoter library of the invention.

The

New artificial promoter libraries - sequences and variable spacers, use expression of genes.

used

containing consensus promoter d to generate promoters for opt

for optimising

Claim 28; Page 69; 89pp; English.

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Title:
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RESULT 1

Query Match Best Local 9 Matches 17	SOURCE SOURCE ORIGIN			COMMENT	JOURNAL	AUTHORS TITLE	REFERENCE	SOURCE ORGANISM	VERSION KEYWORDS	BD006989 LOCUS DEFINITION
Query Match Best Local Similarity 100.0%; Score 176; Best Local Similarity 100.0%; Pred. No. 1. Matches 176; Conservative 0; Mismatches	Location/Qualifiers 1.176 /organism="Saccharomyces /mol_type="genomic_DNA" /db_xref="taxon:4932"	CC Topology: Linear; FH Key Location/Qualifiers FT promoter (8)(171).	PI KALIN HAMMER, PETER RUDAR JANSSEN PC C12N15/09, C12N15/00 CC Strandedness: Double;	 OS Saccharomyces cerevisiae (yeast) PN JP 2001503249-A/58 PD 13-MAR-2001	PATENT: JP 2001503249-A 58 13-MAR-2001; PETER RUDAR JANSSEN	en, P.R. libraries ibraries	Bukaryota; Fungi; Ascomycota; Saccharomycotina; Sacchasomycetales; Saccharomycetaceae; Saccharomyces. 1 (bases 1 to 176)	Saccharomyces cerevisiae (baker	BD006989.1 GI:18635360 JP 2001503249-A/58.	BD006989 Artificial promoter libraries for derived from such libraries.
; DB 6; Length 176; 1.3e-90; hes 0; Indels 0; Gaps 0;	s cerevisiae"	alifiers	NSSEN	east)	R-2001;	for selected organisms and promoters	Bukaryota, Fungi; Ascomycota; Saccharomycotina; Saccharomycetas; Saccharomycetales; Saccharomycetaceae; Saccharomyces. 1 (bases 1 to 176)	(baker's yeast)		BD006989 176 bp DNA linear PAT 31-JAN-2002 Artificial promoter libraries for selected organisms and promoters derived from such libraries.

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                                   Query Match
Best Local Similarity
Matches 20; Conserv
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                    122
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Platt, D., Kopczynski, C., Muzong, C., Laufs
Peterson, E. and Swimmer, C.
Exelixis FlyTag EST Project CK02 Library
Unpublished (2004)
                                                                                                                                                                                                                                                                                                                      Eukaryota; Metazoa; Arthropoda; Hexapoda; Ins
Neoptera, Endopterygota; Diptera; Brachycera;
Ephydroidea; Drosophilidae; Drosophila.
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                                    11.4%; Sillarity 100.0%; Conservative 0;
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/mol_type="mRNA"
/db_Xref="taxon:7227"
/db_Xref="taxon:7227"
/clone="EP10805"
/clone="EP10805"
/clone="b="Exelixis FlyTag CK02 pCDNA-SK+"
/clone="Organ: mixed stage embryos, imaginal disks, and adult heads; Vector: pCDNA-SK+; Site_1: NotI; Site_2: XhoI; Random primed, normalized library from mixed stage embryos, imaginal disks, and adult heads. Subset of Exelixis FlyTag CK01 clones sequenced from 3' end"
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2 pCDNA-SK+ Drosophila
mRNA sequence.
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                                                       Length 156;
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era; Muscomorpha;
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Leung, W.,

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Pterygota;

EST 29-JUN-2004